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## **Streetscape and commercial building design guidelines to support the cultural and historic preservation of the royal town of Pekan, Malaysia**

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**Streetscape and commercial building design guidelines to support the cultural and  
historic preservation of the royal town of Pekan, Malaysia**

by

Roslin Hashim

A thesis submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of  
**MASTER OF LANDSCAPE ARCHITECTURE**

Major: Landscape Architecture

Major Professor: J. Timothy Keller

Iowa State University

Ames, Iowa

2001

Graduate College  
Iowa State University

This is to certify that the Master's thesis of  
Roslin Hashim  
has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy

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## **ABSTRACT**

Pekan is a royal and historic town in the state of Pahang in southeastern Malaysia that has experienced both rapid economic growth and physical development. As a result, many buildings have been demolished and replaced with new buildings that lack traditional Malay design characteristics. Consequently, the new development has become a threat to the preservation of Malay cultural heritage values.

The purpose of this study was to provide the local authority with design guidelines that could potentially strengthen the image of the town as a royal and historic town. A secondary purpose was to provide design guidelines and design ideas to landscape architects, architects and planners for use in preparing historic and cultural district design guidelines in order to preserve the qualities and characteristics of the town.

The study focused on the streetscape features and the historical commercial buildings in Pekan that are located along the Pahang River. In particular, it involved landscape features such as walkways, signage, lighting, signage planter boxes, parking lots and plant material, in addition to a structural analysis of features such as roofing, façades, and color.

First, a literature review and study of archival documents from the United States and Malaysia were conducted to gather data on existing streetscapes in similar locations where successful designs have been applied. A visit was also made to Malaysia to gather data on the present status of the area of study. An inventory was conducted of the site and an analysis of the actual site for the possible development of this area as a historic district. Then suggested guidelines were prepared by the researcher for use by the local authority as well as landscape architects and planners. These guidelines could also be used to establish uniform

design guidelines for historic and cultural preservation of similar towns in Malaysia that face renovation and modernization.

## **CHAPTER 1: INTRODUCTION**

### **Background of the Study**

Malaysia is a developing country with a strong economic performance that in recent years has challenged the development of its infrastructure. The Malaysia government has launched many infrastructure projects such as housing, commercial buildings and highways, for which billions of dollars have been allocated to accommodate and fill the basic needs of its people. According to the Malaysia 2000 budget, \$MR5.33 billion has been provided to upgrade infrastructure facilities and \$MR252.5 million for rural infrastructure development. In the Malaysia case, this large governmental budget has consequences that will directly affect the environment, culture and traditional heritage.

On the other hand, the number of societies or voluntary organizations dealing with the preservation of the historic and traditional heritage in Malaysia is still in small numbers. In 1986, the “Badan Warisan Malaysia” (The Heritage of Malaysia Trust) was established. This non-profit organization is responsible for preserving buildings of architectural and historic interest in the country. According to Mohamed (1995):

It [The Heritage of Malaysia Trust] was formed and registered in August 1983 and its main interest is to protect the natural heritage for the benefits, education and enjoyment of the people in Malaysia and for overseas visitors. Our situation proves that even though the legislation is in place, it can still be willfully ignored by those in power, who do not insist on it being strictly enforced. (p. 4)

The fact that the trust has often been ignored is due to the lack of understanding and acknowledgement among the public sectors about the importance of historic and cultural heritage for future generations. Also, according to the 1976 Town and Country Planning Act of Malaysia, there is no recognition given to the “area concept” of conservation and

preservation in Malaysia (Chahl, 1986). This is due to the lack of awareness among planning divisions in preserving historic landscapes, buildings and sites. In fact some may have created situations that may discourage and even eliminate cultural heritage. Moreover, historic district and community character could be greatly diminished if surrounded with inappropriate development or inappropriate design guidelines are used.

Despite the lack of a strong, governmentally authorized Malaysian programs to protect its historical and cultural heritage, numerous organizations around the world have taken historic and cultural preservation seriously, especially in the developed countries such as the United States and Great Britain. For example, International Council Monuments and Sites (ICOMOS) has been dealing with historic and cultural heritage preservation since 1965. This organization consists of national committees from over 90 countries in the world. One of the objectives of this organization is to collect, evaluate and disseminate information on conservation principles, techniques and policies for cultural and historic districts. The organization also provides opportunities for specialists throughout the world to exchange information and participate in forums dealing with historic heritage conservation.

In the United States, the National Park Service has participated in historic and cultural district preservation since the 1930s. According to Mackintosh (1986), the Historic Sites Act of 1935 established “a national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States” (p. 1). The participation of the National Park service in historic and cultural preservation has contributed to the founding in 1949 of the National Trust for Historic of Preservation. This organization is private and nonprofit with a primary goal to protect and save historic buildings as well as neighborhoods and landscapes (National Trust

for Historic Preservation, 1999). In addition, the National Historic Preservation Act of 1966 declared that, “the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people” (Government Printing Office, 2001). Supplemental information could also be obtained in Great Britain where there are more than 600 organizations that have an interest in historic preservation (Environmental Council, 1993).

### **Statement of the Problem**

Pekan is a royal and historic town in the state of Pahang in southeastern Malaysia that has experienced a rapid rate of economic and physical development. Due to this phenomenon, many buildings have been torn down and replaced with new buildings that lack traditional Malay design characteristics. Consequently, the new development has become a threat to the preservation of Malay cultural heritage values. The purpose of this study is to provide the local authority with design guidelines that could potentially strengthen the image of the town as a royal and historical town. A secondary purpose is to provide design ideas and guidelines for landscape architects, architects and planners to use in preparing design historic and cultural district guidelines to preserve the qualities and characteristics of the town.

### **Need for the Study**

Pekan is a royal and historical town that is rich with Malay cultural heritage. There is a need to increase public awareness about the responsibility to preserve and conserve the unique historical and cultural characteristics of Pekan. Due to rapid development, many new projects have been added without consideration given to appropriate designs that strengthen

the image of this royal town. It is important to develop understanding among public and local authorities in order to conserve resources such as cultural and historic elements so that they can be appreciated in the future as a valuable heritage. Evaluating through a systematic methodology as described in the following paragraphs the image that Pekan should be presented to Malaysians as well as visitors would strengthen this preservation of cultural and historic heritage.

### **Rationale**

It is hoped that alternatives of the design guidelines for Pekan could be adapted for other historic and royal towns in Malaysia. The research includes a review of the literature on conservation for cultural and historic towns. As a developing country, Malaysia has concentrated on development projects without careful study of their implications on the environment, historical and cultural values in the area. Therefore, it is important to increase the awareness of both the local authorities and the public in preserving the unique heritage values that have evolved over the decades.

### **Objectives of the Study**

This study involved the analysis of recent development in Pekan, Malaysia. It also includes the investigation of landscape features such as pedestrian walkways, signage, lighting, planter boxes, parking lots and plant material, in addition to a building structural analysis of features such as roofing, façades, and color. Hence, the main objectives of this study were to:

1. Identify problems in the existing design guidelines in Pekan;



2. Examine and determine the effectiveness of existing design solutions; and
3. Provide improved design guidelines based on these existing problems.

### **Research Questions**

The following four research questions were designed to guide the study:

1. Do the existing design guidelines assist in preservation and conservation of historic and cultural heritage as well as the image of Pekan?
2. How could improved design guidelines be drawn up to increase public awareness of historic preservation and conservation as well as the image of Pekan?
3. How can design guidelines for historic preservation and conservation be used to meet the needs of the local authority, in this instance, the Majlis Daerah Pekan (Pekan District Council)?
4. What can be done to enable planning boards in other cities and towns in Malaysia to comply more completely with historic preservation and conservation issues?

### **Assumptions of the Study**

This study was conducted based on the following assumptions:

1. Pekan has unique significance as a historic royal town, and this particular aspect of its heritage should be preserved or manifested within its public landscape.
2. The existing design guidelines for historic preservation and conservation in Pekan are not effective in establishing the image of Pekan as a royal and historical town.
3. The existing conditions design guidelines for historic preservation and conservation are not fully implemented by the local authority.
4. The existing design for Pekan does not stress historic conservation and preservation.

### **Limitations**

This study was based upon the following delimitation and limitations:

1. The research focused on providing design guidelines for the royal town of Pekan.  
The study involved design guidelines only for streetscapes (i.e., walkways, parking lots, signage, lighting, and planter boxes). Design guidelines for parking and plant materials were also included. The study included structural analyses such as roofing, façades and color to assist in establishing an image of historical and cultural importance in Pekan, as well as to enhance the visual quality of the royal town.
2. The study did not attempt to evaluate or measure the effectiveness of the recent design and development plan of the Majlis Daerah Pekan (Pekan District Council).
3. The study did not intend to change the current design and master plan for the town of Pekan. As mentioned previously, the study focused on providing design guidelines.
4. There was a lack of data available such as maps, a development plan, and historical building documentation for Pekan. In addition, many historical sources were not available due to a lack of documentation or because no documentation existed. Some data were not available due to strict regulations regarding official policy documents. Generally, government documents such as the development plans and existing design guidelines are not published for the public and are considered as classified materials. Therefore, the opportunity to analyze and review this documentation and information was not available.

### Definition of Terms

The following terms were applied in the context of this study:

*Conservation.* An action to keep or save from destruction of the natural environment, historic and cultural values. Care and protection of man-made environments and their components as well as natural resources (Department of Metropolitan Development, 1972, p. 1).

*Cultural landscape.* “A geographic area, including both cultural and natural resources and the wildlife or domestic animal there in, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values”  
(<http://www2.cr.nps.gov/tps/briefs/briefs36.htm>)

*Design guidelines.* An indication or outline of policy to guide design professionals and local authorities in design decision making for proposed projects.

*Historic district-* A defined area in which there are a number of assorted landmarks or history that form a reasonably cohesive grouping (Department of Metropolitan Development, 1972, p. 1).

*Preservation.* Saving, protecting, and maintaining landmarks, districts, and other significant features of cultural and environment quality (Department of Metropolitan Development, 1972, p. 1).

*Royal town-* A town that has been recognized by the government or legislation as a town where the royal family reside. The town usually has a historical significant that is related to the kingship or royalty.

### **Thesis Organization**

This thesis is organized into five chapters. Chapter 1 provides the introduction and gives some background about development progress in Malaysia, including complications related to the historic town and cultural heritage of Pekan. Chapter 1 also presents a statement of the problem, purpose and need for the study, the research questions, assumptions, limitations, and definition of term for use in the study.

Chapter 2 provides a review of the literature review on conservation, historic districts and historic preservation, cultural landscape and design guidelines, as well as literature useful to this study. The sources were from Malaysia as well as the United States. It is also provides some general background information about Malaysia and the site of the study, Pekan, Pahang.

Chapter 3 provides an analysis of the existing design problems in Pekan and the results. Chapter 4 provides some new appropriate design guidelines. Finally, Chapter 5 presents the summary, discussion and conclusions for further research in design guidelines in Malaysia.

### **Summary**

The royal town of Pekan in the state of Pahang, Malaysia is a unique town with significant historic and cultural heritage value. In addition to being recognized as a royal town in Malaysia, the town is also known by its unique characteristics in terms of its buildings and landscape. Due to the rapid development of buildings and other facilities, the local authority and the public have seemed to put aside the conservation and preservation aspects necessary for the survival of the cultural and historic heritage of the town of Pekan.

Since their conservation and preservation are complex historic and cultural districts and dynamic, therefore, it is important to appropriately plan and implement the design structure of the town. The development of appropriate design guidelines is necessary in order to preserve and conserve the characteristics of this town. Such guidelines will also assist in determining the future direction of Pekan.

## **CHAPTER 2: REVIEW OF RELATED LITERATURE**

### **Literature Sources**

The literature review in this chapter provides a general introduction to Malaysia, followed by a background of literature related to this study. The main literature sources in this study were from library documents. As common in many libraries, the search was based on electronic databases and bibliographies. The databases listed a collection of published books, journal articles, and articles on related topics. Due to the variety of topics related to design guidelines and the relationship to other topics, the resources were divided into five general issues: (1) an introduction to Malaysia; (2) general background of Pekan; (3) general historic district and historic preservation issues; (4) cultural landscape; and (5) design guidelines.

### **An Introduction to Malaysia**

#### **Geography**

Malaysia's location between the South China Sea and the Indian Ocean has contributed to a very strategic location for businesses, investment, and tourism. Malaysia has two borders—Thailand in the north and Singapore in the south, and it is comprised of two parts—the main peninsula and East Malaysia, which is separated from the mainland by the Strait of Malacca (Figure 2.1). The peninsula of Malaysia consists of eleven states whereas East Malaysia consists of two states, Sabah and Sarawak. Peninsular Malaysia covers a total area of 50,000 square miles whereas Sabah and Sarawak share an approximate total of 79,000 square miles. Malaysia has a large amount of its rainforest preserved. This rain forest

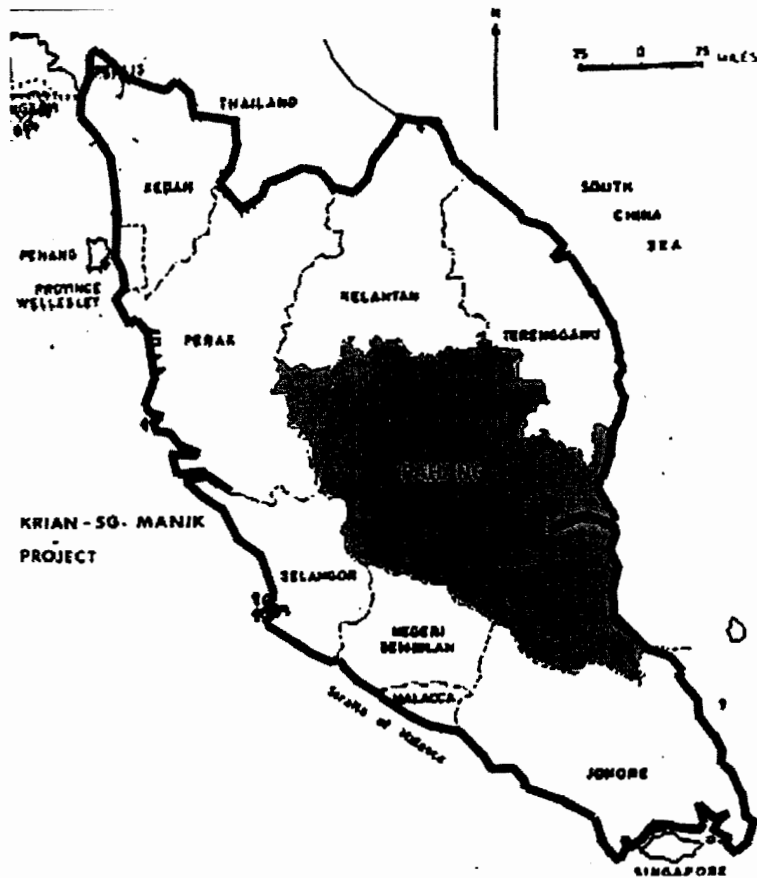


Figure 2.1. The state of Pahang in peninsular Malaysia (Sabran, 1992, p. 63)

contributes to 80 percent of the total land area of Malaysia. Malaysia has a tropical climate, which is highly warm and humid. Monsoon season usually occurs in the coastal area which produces heavy rainfall from October to April. The average total rainfall is about 90 to 100 inches.

### **Government**

Malaysia, as mentioned previously, consists of 13 states altogether and is governed by a parliamentary democracy, with a Prime Minister as a head of state. Each government has

its chief minister. Nine of thirteen states still retain a king, or sultan, who is a custodian of the Malay culture and religion for his state. The main political party in Malaysia is the United Malay National Organization (UMNO), which has been the leadership party since Malaysia received its independence in 1957. The opposition party is the Pan- Malayan Islamic party (PAS), which recently controlled two states on the East Coast of Malaysia. Nevertheless, despite political differences, both parties are defenders of Malay society.

### **Economy**

Malaysia has been recognized as among the fastest growing countries in Asia. Based on the Fourth Malaysian Plan, for the period of 1976 – 1980, Malaysia had seen steady growth. Based on per capita GNP, Malaysia is one of the wealthiest countries in Asia with a steady growth rate noted during 1976 – 1980 (Wegelin, 1978, as cited in Sabran, 1992). Basically, Malaysia's economy today has been influenced by its early years of British rule. In the 19th century, Malaya was well known for its tin and rubber products that contributed profits to British Empire. Chinese immigrants had initially been imported to work the tin mines whereas the Malays were trained for the government. This phenomenon contributed to the imbalance with economic control in largely Chinese hands. Although it is common that political strength (which is dominated by the Malays) is associated with economic strength this is not what has actually happened with the Malays. Consequently, in the 1960s, the government introduced a series of economic policies to improve the position of the Malays. According to Rao et al. (1977, p. 22), in 1970 about 85 percent of those earning less than RM100 (US 378) a month were Malays. About one-third the increase in Gross Domestic Product (GDP) went to non-Malays and foreigners.



In the 1980s, palm oil surpassed the rubber and tin industries that had acted as the major economic contributor. Previously, palm oil and rubber plantations can be seen in nearly all of lowlands in the 13 states. In the last decades of the 20<sup>th</sup> century however, manufacturing industries have overtaken agricultural industries. In the 1980s, Malaysia's fourth Prime Minister, Mahathir Mohamed, initiated a "Look East" policy and encouraged heavy industrialized industry, including the production of a national car and the development of oil and natural gas refineries. Tourism also is one of the fastest growing industries that contributed to Malaysia's economic development. Today, Malaysia is one of the countries that promotes its tourism industry to diversify its economic resources. The government of Malaysia has undertaken numerous campaigns to provide aggressive efforts in promoting tourism. "Visit Malaysia Year 1990" and "To know Malaysia is to love Malaysia" are two campaign slogans promoted by the tourism department of Malaysia. Tourism includes promoting Malaysia as a rich tropical island and significant natural heritage as well as a land of fascinating ethnic and cultural diversity.

In the past few years, the tourism industry has made a major contribution to foreign exchange earnings and economic growth. The potential for expansion is still tremendous as the country has many natural attractions that have yet to be developed to attract more tourists. The country has among the best and the cheapest facilities and tourist products in the region. In 2000, a total of \$MR240.5 million is proposed to implement development projects and promotional activities including promotion overseas. As a result of these efforts, an estimated 6.5 million tourists were expected to visit Malaysia in 2000 compared to 6 million in 1999.

The government is determined to make Malaysia a center for trade and international exhibitions. Malaysia has been successful in organizing international exhibitions in the aviation and maritime industries in Langkawi. To further supplement the exhibition facilities, the Sultan Abdul Aziz Shah Airport in Subang has been transformed into an International Trade and Exhibition Centre – ITECs, including an aerospace park, intelligent warehouse, aviation business park, research and development and theme park. The development of ITECs involved six exhibition halls with a space of 34,400 square meters and an open hall covering 130,000 square meters. The Government also encourages the organization of international meetings, seminars, conventions and exhibitions.

### **People**

Malaysia is a multi-racial society. Malays which form the dominant ethnic group in the country and comprise 55 percent of the population, number almost 18 million. The other ethnic groups include Chinese (34 percent), Indians (9 percent) and other (2 percent). The national language is Bahasa Malaysia, which has common ground with English. Although Bahasa Malaysia is the official language of all Malaysians, other languages such as English, Tamil and Chinese dialects are widely spoken.

### **Religion and culture**

While the official religion is Islam, other religions such as Buddhism and Hinduism are free to be practiced by the citizens of Malaysia. Nearly all Chinese are Buddhists and Indians are Hindus. Buddhism, which was introduced by Chinese immigrants in the 15<sup>th</sup> century, is the second largest religion in Malaysia after Islam.

Due to the variety of ethnic groups, Malaysia is famous for its variety of cultural heritages, which includes the Malays, Chinese and Indians as well as the numerous ethnic tribes of Sabah and Sarawak. The fasting month of Ramadhan and its celebration at its close are among the most important events in the Islamic events calendar. Other celebrations include the birthday of the prophet of Islam and the celebration of the Muslim pilgrimage to Mecca. Chinese festivities are completed with the celebration of the Chinese New Year, having the noisiest and most colorful traditional opera. The Indian communities are well known for their sacred temple dances, which are performed at the pilgrimage to Kuala Lumpur's Batu Caves during the Thaipusam celebration. During these events thousands of devotees pierce their bodies as an act of penitence. The Indian people also celebrate Deepavali, which means the celebration of the lights.

### **Pekan**

With total area of 38,614 sq km in size, Pekan is located in the state of Pahang, which is in Southeast peninsular Malaysia. Pekan is about 35 km from Kuantan, which is the capital of the state of Pahang (Figure 2.2). Pekan is also a riverfront town, located near the Pahang River's mouth to the South China Sea. According to a survey conducted by the Malaysian Population Department in 1997, the population of Pekan is 103,000 and can be divided into three major races: 90.78% Bumiputra (Malays), 2.25% Chinese, and 1.42% Indians. The remaining 4.3% is comprised of immigrants from outside Pekan. Each ethnic group has its own language, identity and cultural qualities. However, because of its overwhelming majority, the Malay culture predominates Pekan. The Pekan community, especially its Malays, can be described as a "humble" people who are usually very friendly.

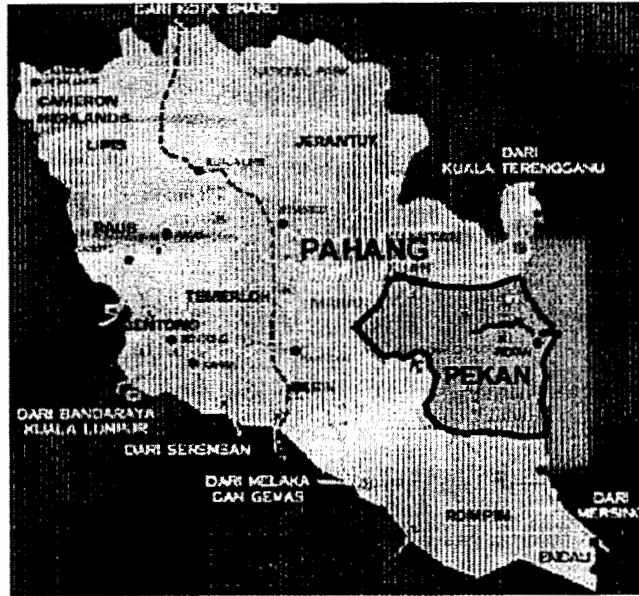


Figure 2.2. View of the town of Pekan in the state of Pahang (Pahang, 2000)

Pekan has been recognized as a royal town based upon its history and residency of [his majesty] the Sultan of Pahang. There are about nine palaces in Pekan with three of them presently occupied. Pekan is administrated by Pekan district office under the leadership of the Pekan district officer.

### **A brief history**

The first use of the name “Pekan” was in association with the “Pekan flower” which grew along the “Pekan River.” However, the river no longer remains except as part of the tidal stream running into the Pahang River. According to Swettenham (1907), Pekan was established in the 17<sup>th</sup> century and got its name from the flowers that could be found along the Pahang River, which flows through Pekan’s downtown district. On the other hand, the town’s name may have originated as a “town” or “market place” or “a place for buying and selling” which is its literal meaning in Malay. In its past history, Pekan was known as a

trading center that attracted businessmen from all over the world, including Arabs, Siamese, Chinese and the Bugis. Based on history, Pekan was occupied by the Siamese before Pahang fell to Malacca in 1454. When the British invaded Malaya in the 19<sup>th</sup> century, Pekan was administrated by England as a British Colony following the signing of the Pahang-British Agreement of 1885. During that period, Pekan was the Capitol of the state of Pahang and Hugh Clifford, a British officer, was its first administrator. In 1957, Malaysia declared its independence from British rule, and Pahang resumed its former tradition of rulership by kings. King Sir Abu Bakar, who was a figurehead during the British occupation, resumed the royal family rulership of Pahang and was later succeeded by his son, King Ahmad Shah, who resides in Pekan and is its current ruler.

### **Current land use**

Basically, Pekan is a developing small town with its richness in natural resources. Based on land use analysis by the Pekan District Council, the land use can be categorized as 42.5% forest reserve, 20.1% housing area, 14.6 % rivers, 6.1% mangrove swamps, 4.8% industrial area, 2.9% school area, 2.1% channel area, 1.9% agriculture area, 1.5% golf course area, 1.1% government institutions, 0.6% palace areas, 0.6% cemetery area, 0.4% religious institutions, 0.4% polo field, 0.3% town garden, and 0.1% open spaces (Pekan District Council, 1999).

Based on the current land use analysis, it is appropriate to describe Pekan as rich in natural resources with forest reserves and mangrove swamps that create a unique natural environment and provide ecological balance. However, in 1999 the Pekan District Council proposed a new development plan that is to be implemented by the year 2010. The proposed

development plan proposes 70.9% housing, 4.7% commercials, 4.1% industrials, 4% tourism, 1.2% town garden, 0.6% “Royal/Botany garden,” 0.3% sport complex, and the remaining percentage will include agriculture and research development (Pekan District Council, 1999).

Based on this scenario, although the development in Pekan is still considered to be in the moderate level, future growth will occur at a rapid development level. Design guidelines should be considered and an appropriate plan developed to maintain the identity and image of this royal town. In addition, the local authority should consider the environmental impact of this proposed development as well as the effects on the resident population and resident culture.

### **Development plan**

The proposal of the 1999 Pekan Development Plan by the Pekan District Office was undertaken in accordance with the Town Planning Act of 1976 (Act 1972). According to the 1999 Pekan Development Plan, this proposal is to be completed by the year 2010 in order to create a district administration center, industrial area, commercial area and multifunction development for the residents. In general, the main objective of the development plan is to provide an infrastructure to the town. Following are the development proposals for the town:

1. Concentrate on administration, commercial and tourism development.
2. New commercials areas are established to provide for the needs of the residents.
3. New areas are based on industrial services that will be created.
4. A new area is created for new businesses.

Based on these proposals, it is obvious that the development proposal in Pekan is very general with little attention paid to specific design. There are some cases in Malaysia, for example the Langkawi Development plan of the 1970s, which was criticized by local communities as they witnessed the negative impacts of tourism development to their natural and cultural environments (Saad, 1999). Saad also noted that the governmental response to critics of this development resulted in comprehensive legislation to provide appropriate guidelines for the local authority; however, the local authorities showed a skeptical attitude toward this new act (Saad, 1999). According to Saad, “this may be due to the fact that government assumes that local communities will accept any development brought to them.”

Thus, even though development fulfills basic needs to community, it should be associated with proper design guidelines that can preserve the image and the identity of the place. Design guidelines help local authorities determine the type of alterations, renovations and changes that will maintain the special qualities of the town (Texas Historical Commission, 1981).

### **Architecture and design**

British involvement in Malaysia’s politics in the 18<sup>th</sup> century has influenced the traditional architecture and design styles in Pekan. During that period, people from many nations, such as China and India, also introduced their own style of architecture. As Fee (1998) noted:

The Malayan “bungalow” emerges, a mixture of European and local features, such as timber posts and thatched roofs. A handful of grand garden houses, such as Francis Light’s “Suffolk House,” are built in a mixture of English and Indian architecture. (p. 9)

One famous Chinese architectural style incorporated in 1885 was the narrow-fronted townhouse. These townhouses were built on shop lots that were operated by Chinese merchants. Frank Swettenham, one of the British residents, introduced formal building bylaws, which mandated that the front of these shop houses must be “five-foot way” (Fee, 1998). Thus, among the typical characteristics of these shop lots are the narrow street frontages and the interior air wells that provide light and ventilation (Figure 2.3).

In the 19<sup>th</sup> century, the British “Raj” or Mogul (i.e., mosque) style from India was adopted in order for Malaya to be appropriate as an Islamic country (Figure 2.4). The British “Raj” style originated in India and combined style including both the Gothic and classical symmetry of the European principles of architecture (Fee, 1998). The British colonial style of design also contains a mixture of Renaissance, Palladian, Neoclassical and Gothic revival styles (Fee, 1998). Most designs in this period are elaborate and ornate because human labor was inexpensive. Although British colonial design has spread throughout the nation, the revival of Malay architecture and design resulted in a number of palaces on the east coast of Malaya (Fee, 1998). According to Fee (1998), “Malay architecture and design consist of several architectural elements such as a post and beam structure supporting one, steeply-inclining roof and the elaborate carvings on the wall panels and posts” (p. 37). The traditional Malay architecture commonly can be associated with the use of timber and showpieces of Malay craftsmanship. Currently in Pekan there are a number of palaces that portray Malay architecture, but most of them, such as the palaces of Leban Tunggal (Figure 2.5) and Kota Beram contain a mixture of colonial British design and traditional Malay architecture.





Figure 2.3. Narrow-fronted townhouses typical of Chinese architecture (Fee, 1998, p.99)

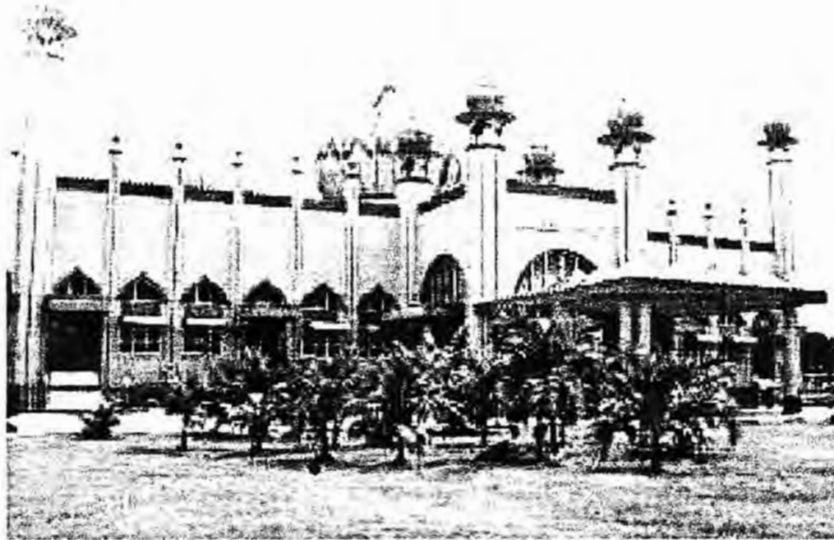


Figure 2.4. Pekin's mosque from British Raj or Mogul style typical of Indian architecture (Pahang, 2000)



Figure 2.5. Pekan's Leban Tunggal Palace (Pahang, 2000)

In the 20<sup>th</sup> century the demand for rubber resulted in a flow of wealth in Malaya, including Pekan. In this period some buildings adopted ornate facades that were grafted onto the Chinese shop houses (Fee, 1998). However, during World War II in the 1940's, construction came to a standstill (Fee, 1998). After World War II, true modernism arose in architecture and design in Pekan.

Present day architecture and design in Pekan are characterized by modern standards and the use of reinforced concrete. According to Fee (1998), after World War II, architecture and design in Malaysia were based on climate and topography (Figure 2.6). As Le Corbusier, one of the fathers of modernism, noted, his designs deal with the issue of climate and topography (Trachtenberg & Hyman, 1986). Fee (1998) noted that Malaysia's independence in 1957 portrays the country's vernacular heritage as well as a combination of modernist principles.



Figure 2.6. Modern housing based on climate and topography (Fee, 1998, p.99)

### Conservation

Conservation has been defined as “special steps to prevent depletion of a resource” (Whiby et al., 1974, p. 2). From another point of view, conservation has also defined as the preservation and sensible use of the natural and man-made environment (Davidson, 1989). From the above definition of conservation, one can conclude that resource and environment are two important elements in conservation issues.

Conservation plays a major role in the preservation of historic and cultural districts. The International Council of Monuments and Sites (1999) lists several principles for historic preservation of smaller towns, two of which were selected for use in the current study:

1. The smaller town's historic core still marks the center of social life and business, and contains a largely unspoiled part that is integral of the image of the town.
2. The historic town has not expanded beyond its historic core (which is still visually dominant) and has sometimes kept its wall.

Conservation policies in many developing countries, including Malaysia, have not, until recently, been implemented adequately. This omission is most likely due to the lack of public awareness and well as a lack of information about conservation issues. As the International Council of Monuments and Sites (1999) mentioned in its report about countries of the developing world, the rapid expansion of population and the accelerating influx of people to the towns threaten to destroy the existing settlement structure. The International Council of Monuments and Sites (1999) also noted that historic preservation must be an integral part of every community's comprehensive planning and design process. Such policy will ensure that the conservation process is included in every aspect of planning and development. It also ensures that conservation includes plans for land use, economic development, housing, public utilities and facilities, transportation, recreation, housing and social services, and open space and urban design.

According to Murtagh (1997), in his book, *Keeping time*, the local authority needs to encourage more local involvement and bring it into action. The author also mentions that: "At the national level, further thought and action must be given to where the responsibility for preservation lies in the federal government and how government programs are funded," (p. 169). Therefore, it is important that the local authority understand the concept of conservation and its benefits to gain a more positive public attitude and awareness.

### **Historic District and Historic Preservation**

The notion of "historic district" is not a foreign concept for western communities. Although it has been used for decades, only recently it is rationally considered by the government of Malaysia with the declaration of the town of Malacca as a historic town. The

United States National Register of Historic Places defines a district as, “A geographically definable area, urban or rural, large or small, possessing a significant concentration, linkage, united by past events or aesthetically by plan or physical development,” (cited in Murtagh, 1997, p. 103).

The National Register of Historic Places further defines that a historic district as a geographical area that historically has been used by people where human activity, occupancy, or intervention has modified it. A historic district may also possess a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features (McClelland & Keller, 1994).

The concept of historic district can be established by examining the significant historic properties and organized historic contexts based on common themes, periods of time, and geographic areas. Bowsher (1978) reported that communities seek to save buildings and the surrounding environment in order to safeguard a historical or architectural legacy. Communities also seek to enrich the cultural identity of an area to stabilize and strengthen property values, and attract businesses, residents and tourists who value the area’s special qualities or value the sense of place and character.

The International Council on Monuments and Sites (1999) lists several principles and objectives in the preservation of the historic town:

1. In order to be most effective, the conservation of historic towns and other historic urban areas should be an integral part of coherent policies of economic and social development and of urban and regional planning at every level.
2. Qualities to be preserved include the historic character of the town or urban area and all those material and spiritual elements that express this character, especially:

- a. Urban patterns as defined by lots and streets.
  - b. Relationships between buildings green and open spaces.
  - c. The formal appearance, interior and exterior, of buildings as defined by scale, size, style, construction, materials, color and decoration.
  - d. The relationship between the town or urban area and its surrounding setting, both natural and man-made.
  - e. The various function that the town or urban area has acquired over time. Any threat to these qualities would compromise the authenticity of the historic town or urban area.
3. The participation and the involvement of the residents are essential for the success of the conservation program and should be encouraged. The conservation of historic towns and urban areas concerns their residents first of all.
  4. Conservation in an historic town or urban area demands prudence, a systematic approach and discipline. Rigidity should be avoided since individual cases may present specific problems.

The principles and objectives listed previously will help determine and establish understanding about historic district preservation among the public. In many cases in the United States, most preservationists preserve ancient buildings and sites because these will add to the variety and beauty of daily life that is more mechanized and stereotyped (Whitehill, 1983). Historic preservation in the United States was established several a decades ago because many historical sites were lost and many more were in jeopardy. According to Carl (1983) in his article, *Our lost inheritance*, the lost of historic resources is caused by lack of knowledge and lack of a national inventory. However, many other causes

have contributed to these losses. Some losses are accidental and avoidable, and many manmade properties are lost due to neglect and indifference (Carl, 1983).

On the other hand, the interest in historical districts is relatively new to Malaysian communities due to insufficient knowledge and understanding of the historic context and human influence on the landscape. The need for rapid development and basic infrastructure has resulted in ignoring historic preservation issues and irreparable damage to the historic and cultural character has occurred certain areas. The need for economic opportunities has also contributed to the lost of historical sites when tourism industries have developed on a grand scale with considerable acreage turned into tourist resorts and hotels (Mohammed, 1995). Therefore, it is important to provide a balance between the needs of development and the need for preservation in historic and cultural districts.

### **Cultural Landscape**

Cultural landscape is basically related to the culture, landscape and human activity within a society. The United States of National Parks Service defines cultural landscape as, “a geographic area, including both cultural and natural resources and the wildlife or domestic animal there in, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values” (<http://www2.cr.nps.gov/tps/briefs/briefs36.htm>). According to Taylor (1993), cultural landscape is “The everyday landscapes which surround us and in which we conduct our activities (p. 13). Galbreath (1975) described cultural landscape as, “areas in which natural attributes combine with human events or decisions to lay a pattern followed by subsequent human settlement” (p. 3). Based on the above definitions, although cultural landscape can be broadly stated, it can be associated with the landscape and cultural

values in the society. Cultural landscape exists wherever human beings have interacted with the environment and leave something of historical significance in a certain place.

Cultural landscape can be categorized into several types. Keisteri (1990) categorized the cultural landscape into three observable types: (1) farming; (2) village; and (3) city landscape (see Figure 2.7). On the other hand, Galbreath (1986) classified the American landscape to nine distinct groups: (1) unity of architecture and nature; (2) interaction with built environment; (3) land patterns and human events; (4) land and water relationships; (5) sites of battles or fortifications; (6) building forms that reflect the landscape; (7) specialty crops and the landscape; (8) lifestyles and landscapes; and (9) natural phenomena and landscape.

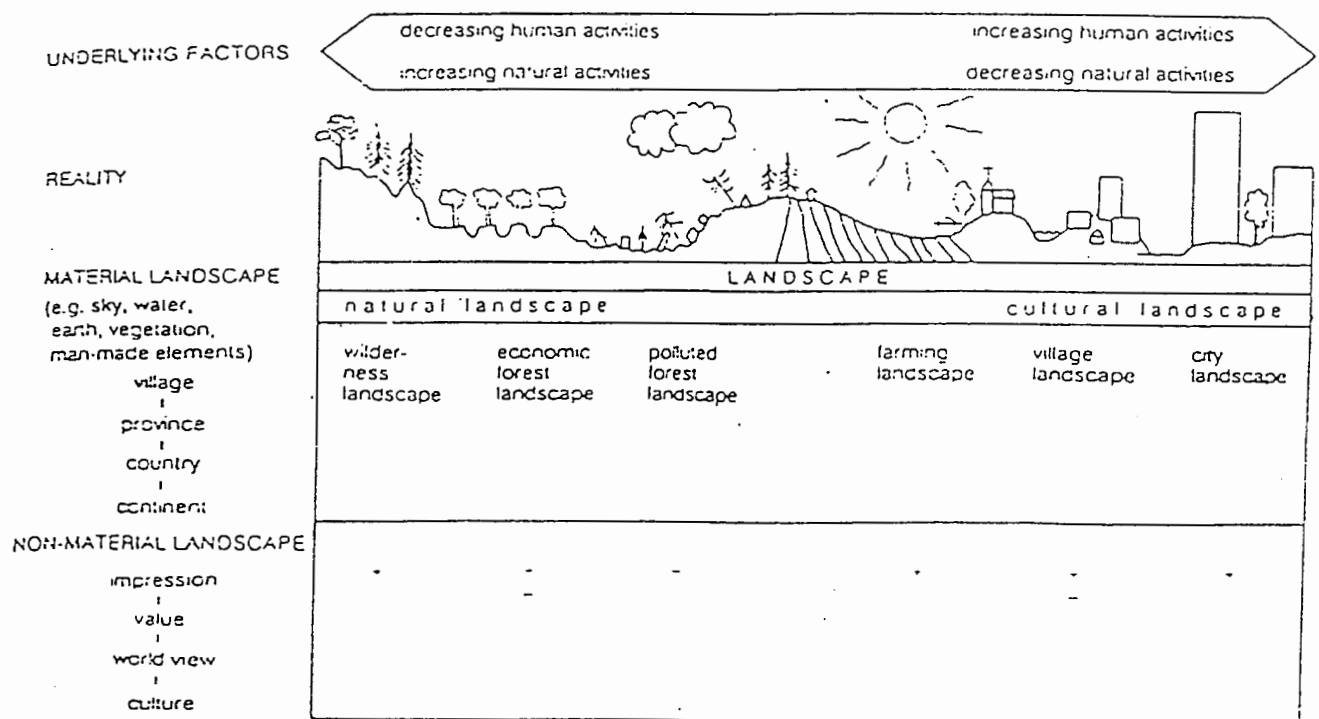


Figure 2.7. Categories of cultural landscape (Keisteri, 1990, p. 55)



Originally, cultural landscape was identified within an agricultural or rural setting, but it became more broadly interpreted due to changing development. For example, in the United States, the term cultural landscape covers landscape that range from Mt. Olympus to the American Great Plains and include early iron foundries in Pennsylvania, a lighthouse on a lonely point in Puget Sound, and the Homestead hotel and grounds in Virginia (Galbreath, 1986, p. 7).

Although interest in cultural landscape is relatively new, it is being supported by societal understanding. It is also becoming a global awareness issue associated with environmental problems. However, awareness among many agencies and local authorities is the key to ensure that evidence and past land use can be protected. Galbreath (1975) mentioned that existing regulations could not protect the cultural landscape effectively since many regulations are also designed to protect other values such as social, economic, and ecological aspects. Galbreath also noted:

Just as we look back from the age of environmental statements to the day when the usual way to dispose of open land on a planning map was just to color it green, so we must look to a time when aesthetic and cultural considerations will be widely accepted in the planning process. (p. 9)

It is important to recognize historic and cultural landscape in the planning process and distinguish these special areas with other areas. Mohammed (1995) remarked that:

Since cultural landscapes represent the work of man and nature, it is therefore important that they be conserved so as to give a sense of continuity with the past, as well as to provide a later option for use or reuse in the future (p. 104).

### **Design Guidelines**

Design guidelines are needed in an area to protect the visual appeal of the community, its buildings and open space. Cui (1995) defined design guidelines as a method

employed by architects and urban planners to systemize program formulation and statement. Therefore, design guidelines are usually formulated to give guidance to design professionals in developing their designs or redesigns for buildings and their landscape. Design guidelines are also important to encourage ingenious, compatible and sensitive design and make recommendations on siting, form and materials to ensure harmony within the landscape (Land and Community Associates, 1988).

Several studies have been performed in the United States in developing standards and guidelines on historic districts and cultural landscape. In 1981, the Galveston Historic Board proposed design guidelines for the Galveston Historic District. Galveston is one of the cities in the United States that has a large collection of late 19<sup>th</sup> and early 20<sup>th</sup> century buildings. Figure 2.8 illustrates a section of the city from a historical drawing done in 1885. The purpose of the Galveston study was to help property owners and local authorities in determining the types of alterations, renovations and changes that will maintain the special qualities of the historic districts in Galveston. In Galveston, design guideline considerations have been suggested for residential buildings, commercial buildings, landscape and new construction buildings. The United States Secretary of the Interior has published standards and guidelines for both the rehabilitation of historic buildings and for historic district; these guidelines are very clear and commonly accepted by property owners (Tyler, 1994, p. 146), and in the United States as the most comprehensive preservation guidelines available in that country.

Thus, design guidelines are important in order to maintain the future direction of a certain city or district. Design guidelines are also responsible for preserving the traditional heritage and cultural value in a certain area.

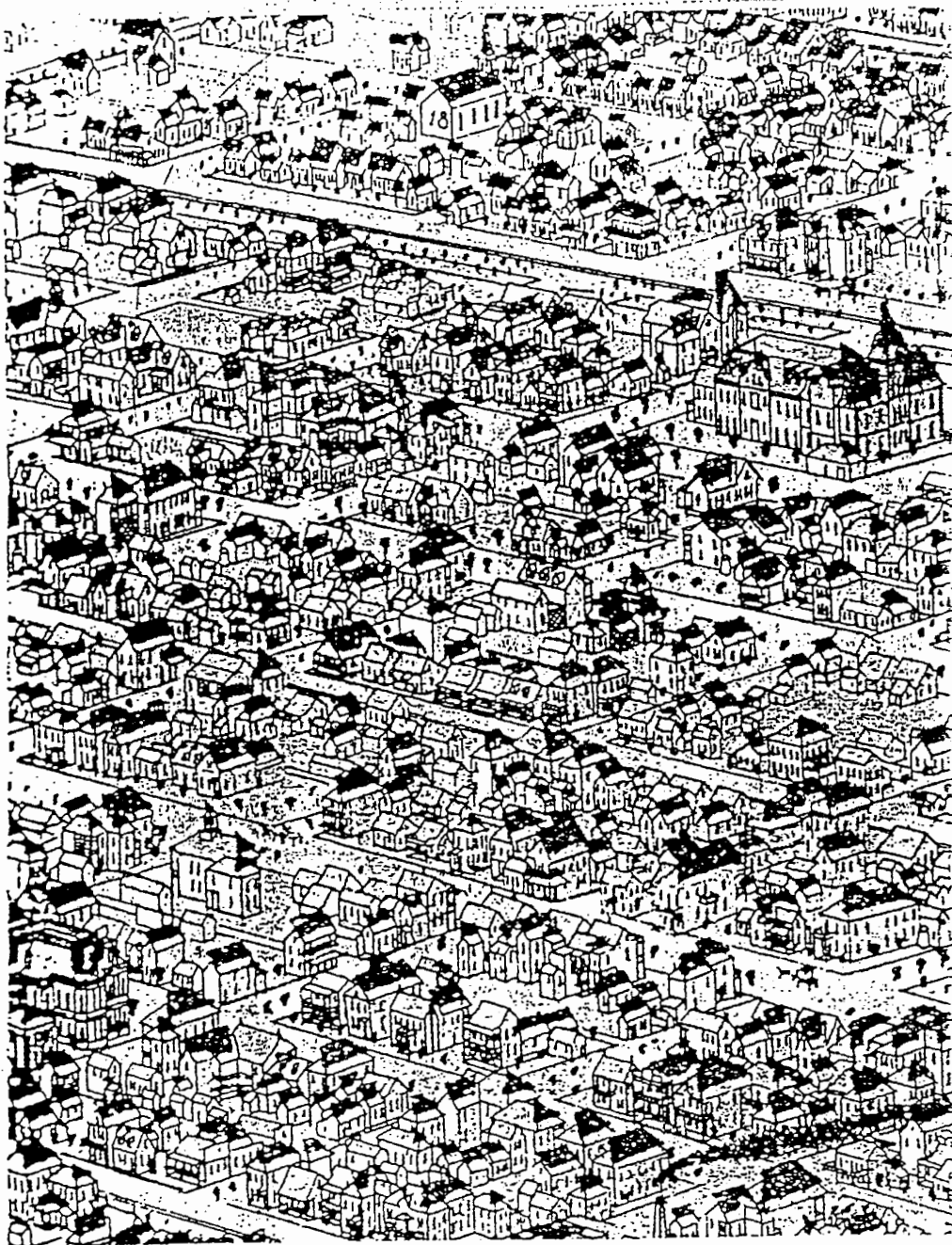


Figure 2.8. Bird's-eye view of Galveston, Texas, 1885 (Beasley, 1981, p.7)

### **Summary**

Conservation, preservation, cultural landscape studies and design guidelines are important issues when dealing with historic and cultural districts. Conservation and preservation in historic and cultural districts are vital to avoid environmental degradation and destruction of cultural elements, as well as to show respect to the character of the town and maintain its visual qualities as a historic town. As Jean-Louis Luxen (1993, as cited in Mohamed, 1995) noted, conservation must be constantly cultured and nurtured, in the face of changes in technology, living standards, ideas and attitudes.

### **CHAPTER 3: METHODOLOGY**

This chapter summarizes the research method used in this study. The historical and cultural preservation focused on Pekan, Pahang, Malaysia as a design that could be used for similar towns. The following methods and procedures focused on achieving the main objectives of the study:

1. General description of streetscape elements.
2. General description of parking and plant materials.
3. General description of historical commercial buildings.
4. Inventory and analysis of streetscape elements in downtown Pekan.
5. Inventory and analysis of Pekan's historical commercial buildings.

#### **Streetscape Elements**

People generally assume that cities or towns are comprised of buildings. They do not realize that a plan for streetscape helps to shape and support the elements of design that contribute to the atmosphere of the area. As Malt (1979) noted:

In the recent past, little concern has been given to the appearance of the public space although more than a third of the total area of any community, particularly in the central business district, is considered public space- streets, plazas, park, parking lots, alleys. (p. 3)

Streetscape element is the term applied to landscape features such as pavement, sidewalks, street lighting, signage, planter boxes, etc. Such features are used for the purpose of improving physical and visual elements used to identity and form an image of a place. These elements also have been used for the purpose of security, traffic control, housekeeping and amenity (Malt 1979, p. 4). Streetscape elements such as sidewalks can bring people

together. According to Jacobs (1961, pp. 55-56), sidewalks bring people together who might not know one another in an intimate, private or social fashion. Streetscape is another important townscape element. This element serves to link individual building and groupings of buildings to form a broader scale of townscape images. According to Malt (1979), “Streetscape furniture should be selected either for uniformity to provide continuity throughout the neighborhood, or for disparity to signify a particular place” (p. 3).

### **Development and selection**

Selecting streetscape elements is a very important process in the planning and design process. The streetscape elements should be carefully selected to better complement into existing structures and architecture. There are six general principles employed in the selection of streetscape furniture (Malt, 1979):

#### **1) Form**

Design of luminary and the lighting post should be complimentary.

#### **2) Scale**

Scale concerns the apparent size of an object in relation to its surroundings. In street furniture such as traffic signs, the actual sizes are often predetermined by statutory, technical, or manufacturing considerations. The choice of designs, which will combine to be of the correct proportion and scale in the overall scene thus, is of primary importance.

#### **3) Material and Color**

The choice of material maybe influenced by the character of the surrounding (including the color and texture of the ground surface) and of other street furniture being used in the area. Color has an important bearing upon the item's visual acceptability. Good street elements can be ruined by crude and sensitive color schemes or by unsuitably bright colors. If there is a doubt as to the appropriate color, a neutral color should be used.

#### **4) Siting**

Siting of streetscape elements should always take into account the appearance of the scene as a whole, as well as the functional requirements. It might be possible to combine certain items and elements, for example, bus shelters and information signs. Items should never be installed without first relating them to others and already exist in the area. The lighting post usually dominates the

character of a street scene. The design of a luminaire should be studied in relation to its supporting structure, whether a wall brackets or a post.

#### 5) Graphic

Many streetscape element communicate information; for example, signs identify the names of streets or bus stops. They may convey instructions such as where to put litter. Whatever the need, a community alphabet and style of application should be determined and outlined in a format similar to that of identification programs. Graphics should be as followings:

- a) Scale drawings of the approved alphabet(s);
- b) Permissible sizes of messages and when used;
- c) Location of messages on the sign panels; and
- d) Where and how to install signs. (pp. 4-5)

### **Pedestrian walkways**

The pedestrian system is one of the most important elements in a streetscape.

Pedestrian walkways are, in actuality, a part of the street. According to Jacobs (1961), sidewalkways serve many purposes besides carrying pedestrians; they also function as a part of the circulation system proper working of cities. She also noted:

Streets and their sidewalks, the main public places of the city, are its most vital organs. Think of a city and what comes to minds? Its streets. If a city's streets look interesting, the city looks interesting; if they look dull, the city looks dull. (p. 29).

Pedestrian walkways provide safe and clearly defined spaces for walking, meeting, and cycling. Individual development such as shops, buildings or residential areas should be linked conveniently to the overall pedestrian network in order to achieve a pedestrian-friendly environment and a high level of pedestrian permeability. Pedestrian walkways should also be designed to encourage pedestrian usage both day and night. On the other hand, a paving system is one of the key elements in putting the pedestrian system together. Malt (1979) describes that a paving system should be designed based on visual quality and its

function. A good paving system and construction contributes to visual quality and low maintenance cost. Malt also mentioned:

A sophisticated, aesthetically pleasing pedestrian surfacing must be designed according to the different bearing conditions it will undergo. Because of significant temperature changes, the system will be subject to thermal stress and movement (p. 8).

### **Planter boxes**

A street element that normally exists in Malaysian city is the planter box. Even though a planter box may be considered as a small part of streetscape elements system, the selection of size, weight and durability of the planter box is important. The possible relocation of the planter box is another factor to consider when large crowds are expected or for special events when rearrangement is needed. The color and size of the planter box is also important in order to determine the visual quality and its suitability to the design of the surroundings. An important aspect in planter box design is to provide for proper drainage. They should also be designed to avoid drainage stains on pavement and other surfaces.

### **Lighting**

Lighting is also a key feature in the streetscape design. Lighting can be related to two classes of users—the drivers of vehicles and the pedestrian (Lurkis, 1976). The lighting system can function to provide guidance to drivers during the night, as they traverse the roadway and intersections. There are several benefits to proper street lighting (Lurkis, 1979):

- a) Reducing night accidents, attendant human misery, and economic loss;
- b) Preventing crime and aiding in police protection;
- c) Facilitating traffic flow;



- d) Promoting business and industry during night hours; and
- e) Inspiring community spirit and growth. (p. 21)

The amount of “visibility” is an important consideration in order to maintain the function of the lighting system. Lurkis (1979) defines visibility as: “how well a particular object (the task) can be seen” (p. 21). Lurkis further discusses three aspects of visibility:

- a) Level of brightness – The brightness factor is directly related to the intensity of light striking an object and to the object’s reflectivity. As example, worn asphalt has a directional reflectance factor of 0.8 compared to worn concrete’s factor of 5.0 as seen from the same viewing angle. Aluminum paint has a reflectance of 60 to 70 percent; limestone 35 to 65 percent.
- b) Contrast- Contrast is the relationship between the luminance of the object and its immediate background. Black clothes against a dark gray background are difficult to see. For example the same black clothes against white a white background require much less visual effort. To overcome poor contrast conditions, higher illumination is required.
- c) Time – Seeing requires time. A camera provides a good example. A long exposure is required in dim light as compared to a fast exposure in good light. The time factor is extremely important in dynamic seeing. (p. 21)

A good street lighting system must be in balance with the level of energy used.

According to Malt (1979), good lighting and energy management must include the efficient use of luminaries and lamps designed to be lighted, good operating procedures, and an established maintenance program planned at the design stage. A good example is the program the American National Standards Institute adopted in 1977 as the American Standard Practice for Roadway Lighting and guidelines applicable for illumination requirements for roadways (Table 3.1). This requirement will ensure the main focus of lighting, which is to provide safety of places, upgrade direct view, and provide visual quality.

Table 3.1. American National Standard Practice for recommendations for average maintained horizontal illumination for roadway lighting and pedestrian way, 1977

Roadway			
Vehicular Classification	Footcandles		
	Commercial	Intermediate	Residential
Major	2.0	1.4	1.0
Collector	1.2	0.9	0.6
Local	0.9	0.6	0.4
Alleys	0.6	0.4	0.4

Note: *Uniformity Ratio*:  $\frac{\text{Avg.}}{\text{Min.}} < \frac{3}{1}$

Except in local residential streets where it may be as high as:

$\frac{\text{Avg.}}{\text{Min.}} < \frac{3}{1}$

Pedestrian Way			
	Footcandles		
	Average Footcandles	Security Areas: Footcandles	
		Low Mount 9 – 15 ft.	High Mount 15 – 30 ft.
<b>Roadside Sidewalk</b>			
Commercial	0.9	2.0	4.0
Intermediate	0.6	1.0	2.0
Residential	0.2	0.4	0.8
<b>Walkways</b>			
Park	0.5	0.6	1.0
Pedestrian Tunnels	4.0	5.0	-
Pedestrian Overpass	0.3	0.4	-

Note: *Uniformity Ratio*—Average Area  $\frac{\text{Avg.}}{\text{Min.}} < \frac{4}{1}$   
 —Security Area  $\frac{\text{Avg.}}{\text{Min.}} < \frac{5}{1}$

Source: Lurkis (1979). *Streetscape equipment sourcebook*. Washington, DC: ULI-the Urban Land Institute, p. 22.

## **Signage**

Signage is an important communication tool in city or town design. Poor usage or inappropriate locations of signage can suggest environmental degradation. Signage design should be simple to read and related to the surrounding character design. The surrounding character design includes traditional, postmodern, or modern design. The physical design of the signage and graphics should be durable, easily maintained and attractive. It is also important to maintain quality and style in order to provide correct information at the appropriate location as well as to maintain visual quality.

According to Malaysia Federal Department of Town and Country Planning (1999), the using of color in signage design should be:

- 1) to increase clarity;
- 2) as a system of coding to designate classification or rank of signs such as recreational, cultural, retail, education and hospitality;
- 3) to create character and act as a decorative design feature. (p. 41)

## **Parking and plant materials**

### **Parking**

The word parking originates from the Medieval Latin word “parricus” which means an enclosure (Childs, 1999, p. 3). Parking lots are found all over the world. Parking serves a vital function for office buildings, commercial buildings, banks, universities, etc. In the past, numerous communities have tried to meet the demand for parking in as much as possible. This is due to the increasing motorization throughout the world. By increasing the number of parking spaces, circulation and roadway capacity could be improved. Chrest (1989) cautions

that planning, designing, and constructing parking is deceptively difficult. He also stated that:

Aside from consideration to the impact on traffic in the surrounding streets, attention must be given to entrance and exits, revenue control, internal traffic and pedestrian circulation, patron security, openness requirements, structure durability, maintainability, and other matters, which are not usually encountered in urban planning type. (p. 1)

On the other hand, parking lots have eaten away cities. As Childs (1999) mentioned:

Unlike the openings of parks and plaza that help define the weave, the holes left by our “functional” parking lots destroy the fabric of a city. Instead of being places to enjoy, parking lots are dull spaces to pass through. (p. 11)

However, he also noted that, for better or for worse, parking is a key component of towns or cities. Childs suggested that landscape architects and architects should build thoughtful designs to prove that parking lots are important as well as interesting. Childs (1999, 22) listed several aspects that designers should consider:

1. the space can be used for multiple purpose, including revenue generation.
2. the attractiveness, safety, and security of the site for public will be improved.
3. neighborhood and governmental acceptance of proposed development can be increased. (p. 22)

### **Plant materials**

Plant materials provide aesthetic consideration that create interest, provide accent, enhance, and offer visual continuity through foliage, texture and variety. Plant materials also can control erosion, increase wildlife diversity, reduce pollution levels, and screen unwanted views and objects (Minnesota Department of Transportation, 1997, p. 43).

## **Historic commercial buildings**

Historic commercial buildings are among the most important building fabrics in a downtown area. According to Land and Community Associates, late 19<sup>th</sup> and early 20<sup>th</sup> century commercial buildings are still the cornerstones and constitute most of the building fabric of downtown business districts (Land and Community Associates 1988, p. 19). These buildings usually incorporate certain elements that tend to form the identity of the town or city. Every city needs historic buildings. As Jacobs (1961) noted:

Cities need old buildings so badly it is probably impossible for vigorous street and districts to grow without them. By old buildings I mean not museum piece old buildings, not old buildings in excellent and expensive state of rehabilitation, although these make fine ingredients, but also a good lot of plain, ordinary, low value old buildings, including some rundown old buildings. (p. 187)

Historic commercial buildings also create diversity in the city.

Cities need a mingling of old buildings to cultivate primary-diversity mixtures, as well as secondary diversity. In particular, they need old buildings to incubate new primary diversity. (Jacobs, 1961, p. 195)

Many cities' enterprises, which become important economic assets, start as small and poor establishments, but they manage to afford the cost of rehabilitation or new construction later. Jacobs (1961) mentioned that the incubation of new primary diversity is observable in the Louisville sample shoe market. At first the rent was very low, but it increased after the market began to attract shoppers. This process cannot occur without the old building as a place in which to start (Jacobs).

## **Inventory and Analysis of Downtown Pekan**

### **Streetscape Features**

The analysis of landscape elements in Pekan was one of the main objectives in this research. The general streetscape elements in Pekan include:

1. Pedestrian walkways and pavement
2. Planter boxes and planting area
3. Lighting
4. Signage

The documentation of the existing condition of these features was collected and obtained from the study site under the jurisdiction of the local authority, the Pekan District Council. The existing landscape features in the site of study were documented and analyzed through visual analysis. Following are the results of the visual analysis conducted by this researcher.

### **Pedestrian walkways and pavement**

Pedestrian walkways are an important element in roadway design. Figure 3.1 shows that there is no designated pedestrian walkway and there are no linkages within the overall pedestrian network of Pekan. The design of the pavement is not compatible with the adjoining development. In addition, the existing walkway is not safe and conflicts with the vehicular access to parking lots. Walkways behind parked vehicles creates hazard (driver not being able to see the pedestrians).



Figure 3.1. Riverside parking and walkway along Sultan Ahmad Road

### **Pavement**

Patterns on the pavement add interest and visual effect to public open spaces. Despite the attractive design of the walkway pavement (Figure 3.2), note the deteriorating conditions of the walkway. The pavement is broken and there is no access for handicap sidewalks.



Figure 3.2. Walkway in disrepair alongside public children's playground

### Walkways

The walkway in Figure 3.3 more closely resembles a walkway alongside the road. This figure provides an example of a drainage grate and an uncovered drainage system. The usual location for a drainage system is between the road and the walkway. This uncovered drainage system encourages rubbish throwing, and it is unsafe to children, the handicapped, senior citizens and handicapped where no access is provided. Notice the grating over the drainage system that enables pedestrians to cross from the walkway adjacent to the road to another sidewalk that is adjacent to the shops.



Figure 3.3. An open drainage system on Sultan Ahmad Road



### **Planter boxes and planting area**

The majority of the trees in public open spaces, parking lots and along roadsides are planted in boxes and in areas surrounded by edging. It is interesting to note that some of trees are historic trees that are over 100 years old (Figure 3.4). Most of the planter areas for older trees have been overgrown by the aging trees and have broken and split the edging because of the size of the tree trunk.



Figure 3.4. An ancient tree in a planter box

Figure 3.5 provides an example of a planter area design found in Pekan's downtown area. The planter boxes are constructed of concrete that has an aggregate finish. Note that the design choice for this group of planter boxes is a poor choice because it is not compatible with Malay design style. The size of the planter boxes is not in proportion size. The white color of the planter boxes also is inharmonic with surrounding environment. The poor choice of color and lack of an appropriate design has created an inharmonic visual effect.



Figure 3.5. Planter box design that is inharmonious with its surroundings

The strategic location of planter boxes should enhance the visual appearance of an area. Note that the tree planter area in Figure 3.6 is located too close to the main road. It is also used to separate two parking areas when curb system should be used in the protection and separation of the road. The poor selection of the planter area design detracts from the visual character aspects of the tree planted within it.



Figure 3.6. A planter area of inharmonious design that is also located too close to the street

## Lighting

Effective lighting should blend in with the natural environment as well as serve a utilitarian purpose. The location of light pole shown in Figure 3.7 is in an inappropriate. The light pole is literally growing out of the low retaining wall. In addition, the selection of lighting design is not compatible with the Malay traditional design. If one looks carefully, it appears that the light is illuminating the sky rather than focused and directed on the walkway below it.

In Figure 3.8, the lighting design appears to be incompatible with its surroundings. In addition, note that the lighting system is not in proportion to the utility poles and stands alone by itself.



Figure 3.7. Lighting design on a walkway alongside Pahang River



Figure 3.8. A lighting system that stands alone and is not in proportion to its surroundings

### Signage

Signage is used to attract the public for informational purposes. In Figure 3.9 the signage is of conflicting design and lacks hierarchy indicating its communication function as well as visual attraction. The colors are inappropriate and the signs are not of a standard color. The size is also inappropriate, with either a too large or too small font size. The font size, hierarchy of the sign, and the color should define a sign's use for different purposes.



Figure 3.9. Poor visual effect created by the lack of a design for signage

## **Parking and plant material**

### **Parking**

Parking design should be convenient and employ safety considerations for users, both pedestrian and vehicular. The parking lot of Pekan, as illustrated in Figure 3.10, does not contain safety standards, and it forces customers to cross a busy roadway to access the commercial shops. In addition, the drivers must also watch the incoming traffic to place their vehicles. The design, in this instance, has created confusion to pedestrians and drivers.



Figure 3.10. Parking for the shops is located across the roadway

### **Small commercial buildings**

Small commercial buildings need to satisfy several design features in order to ensure the success of its owners as well as preserve their environmental setting. As shown in Figure 3.11, the new multi-story building is not compatible with the old double-story historical shop-lots. The setting, size, scale, massing, roof, and use of color are also inappropriate.



Figure 3.11. Lack of compatible design in a new (to the left) building versus the traditional commercial buildings (to the right)

The size and scale of the multi-story building are not proportioned according to the old historical shop-lots. The use of color does not represent the appropriate color for a traditional Malay design nor does the whole structure of the building, including its roof, portray modern architecture.

Historical buildings require careful preservation and upkeep to maintain their attractiveness and utility. Figure 3.12. provides an example of what can happen to a historical old building without appropriate treatment and preservation. Note that the new zinc roofs were installed without the appropriate material and color. The appropriate roof material should be the traditional tiled roof. In addition, the color schemes used for the building do not harmonize with one another. The use of wood-like color could be used to represent traditional Malay design.





Figure 3.12. Inappropriate renovations to a historical building

The new window and awning on the historical old building to the right are not compatible with the windows on the old building to the left (Figure 3.13). In Figure 3.14, the building façade has mold on it as well as an inappropriate color related to its surroundings. Most old building façades have some mold, however, the use of new paint materials that are mold resistant should be considered.



Figure 3.13. Historic riverfront buildings



Figure 3.14. Mold growing on a historic building

### Summary

This chapter presented design features based on the objectives of the study. A general description of streetscape elements, parking, plant materials, and historical commercial buildings was provided followed by a visual analysis of these features as located in downtown Pekan. The next chapter presents a set of guidelines developed by the researcher for the local authority to use for designing or renovating cities and towns within a framework that values historical conservation and preservation.



[illegible]

Figure 4.1. Study area: Pekan, Malaysia

## **Introduction**

Design guidelines were developed based on the existing surrounding elements (i.e., historical, cultural and natural elements) and their significance to Pekan as a royal town. The design guidelines focused on the streetscape framework features that are compatible with the surrounding buildings and natural landscape. The landscape features analyzed were: (1) pedestrian walkways, pavement, and sidewalks; (2) planter boxes; (3) plant material; (4) lighting; and (5) signage. The structural analysis included: (1) roofing; (2) facades; and (3) color.

The design guidelines also addressed the exterior physical appearance of the historical, commercial and shops-lots in downtown Pekan. The considerations included: (1) building size, height, and spacing; (2) building siting, massing, scale, and roofs; and (3) construction materials, color, and detailing.

## **Design and Style Considerations**

These design guidelines are prepared according to historical, cultural and natural resources considerations. As mentioned in chapter 2, the architectural and design tradition in Pekan primarily adopted from the British “Raj” or Mogul style. This British “Raj” style originated from India, mixed Gothic detailing with the classical symmetry of European principles of architecture (Fee, 1998). British colonial designs also contain a mix of Renaissance, Palladian, Neoclassical and Gothic revival architectural styles (Fee, 1998). Chinese people also influenced the architecture and design in Pekan. One popular architectural prototype is the narrow-fronted townhouse. In the 19<sup>th</sup> century some builders adopted the practice of grafting ornate facades and grafted onto Chinese shop houses (Fee,

1998). Besides influences from British, India and Chinese in architecture design in Pekan, the revival of Malay architecture and design in 1842 also played a role in shaping the architectural style in Pekan. The traditional Malay architecture commonly can be associated with the use of timber and the inclusion of showcases of Malay craftsmanship (Figure 4.2). Based on the objective of this study, these guidelines are based on two considerations. First, the streetscape guidelines are based on the general requirements and partly derived from the Malay architecture characteristics. This is based on the image and character of Pekan as a historical and royal town. Secondly, they are based on the small commercial building guidelines preserved from the period of 18<sup>th</sup> and 19<sup>th</sup> century. These buildings, such as the narrow fronted townhouse preferred, used, introduced built by Chinese people, are characteristic of Pekan. Various cultures such as the Chinese, Indian, and colonial British have blended with the traditional Malay architecture and design in shaping the historical and cultural characteristics of Pekan.



Figure 4.2. Traditional Malay woodcarving patterns (Fee, 1998).

## **Streetscape Features**

### **Pedestrian walkways, pavement, and sidewalks**

#### **Purpose and intent**

Pedestrian walkways by definition are places or areas that are high in accessibility. Maintenance of these features is needed to enable the interaction, linkages, and friendly nature of pedestrian sites. It is important that pedestrian activity and interaction are facilitated by maintaining access and providing interest and diversity along with ensuring safety and amenity for the users.

#### **Guidelines**

1. Improve conditions of existing walkways with concentration on repairing all broken concrete and interlocking walkway pavements. Broken curb sections should not be overlooked.
2. Integrate and install alternative paving material into the existing walkways.  
Walkways should be paved with hard and evenly surfaced material. The color, texture and width of the pavement should be considered to provide visual interest.
3. Individual development such as commercial buildings should be friendly and linked to the overall pedestrian network.
4. Attractive pedestrian linkages among commercial shop lots should be developed between buildings and the parking areas.
5. Pedestrian walkways and sidewalks should be accessible and with no maximum than 8% incline for physically challenged individuals (Figure 4.3).

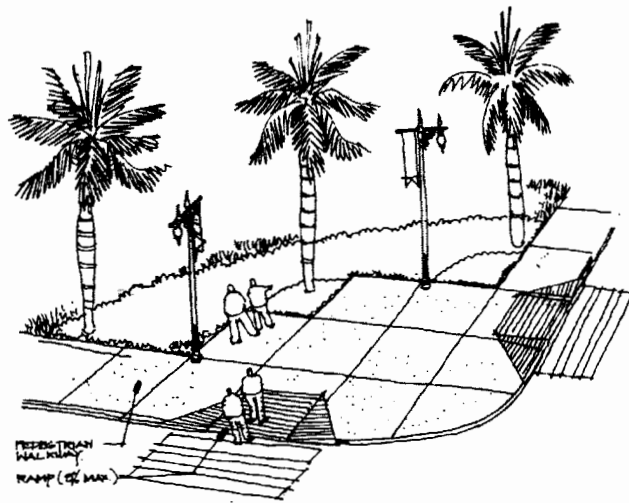


Figure 4.3. Pedestrian walkways with accessibility at crosswalks for physically challenged individuals

6. A high standard of lighting should be provided for nighttime amenity and security, as well as being harmony with the environment (Figure 4.4)
7. The design of pavements should be compatible with the surrounding development. The Malay traditional paving pattern can be used in to establish the image of a cultural and royal town (Figure 4.5).
8. Pedestrian design should encourage use in the nighttime as well as daytime and, where appropriate, provide streetscape furniture such as benches and trash bins.
9. Plant materials should be appropriate to the use and reflect historical and cultural aspects of the town, such as the use of yellow shrubs to represent the royal color.
10. Murals, artwork, sculpture, and water features (i.e., fountains) of interest to the public should be incorporated to provide public interest and cultural identity. Artwork and murals that interpret the cultural history of Pekan should be used for this purpose.

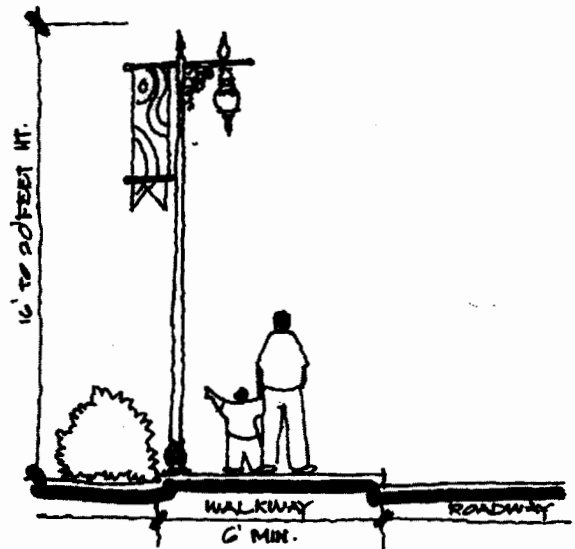


Figure 4.4. Cross-section of a pedestrian walkway

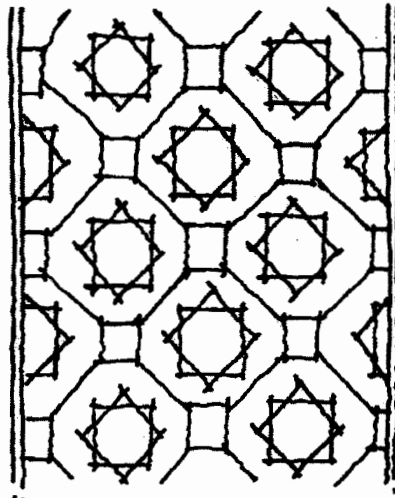


Figure 4.5. Traditional Malay paving pattern

## Planter boxes

### Guidelines

1. Planter boxes can be in various forms but the design should use traditional Malay features such as traditional movement patterns (Figure 4.6).
2. A planter box can be made from a clay pot that symbolizes traditional basins that the Malay people use to wash their feet before entering a mosque or a house.
3. Raised planters within the paved areas should accommodate a depth of 3 ft minimum for trees and 2 ft minimum for shrub plantings.

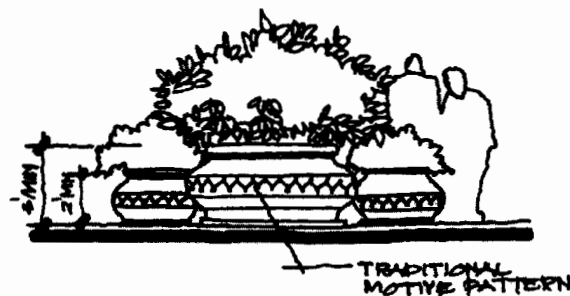


Figure 4.6. Combined tree and shrub potted arrangement

## Lighting

### Purpose and intent

The exterior lighting system is an important streetscape element for night use. It serves as a public convenience, which can make outdoor activities safe and enjoyable for nighttime use. Lighting not only enhances the nighttime image, but also promotes the users

with safety considerations. It can also promote business operations during evenings. Good lighting additionally serves to inspire community spirit and growth.

### **Guidelines**

1. Exterior lighting should be compatible with the architecture of the surrounding historical buildings. Imitation of traditional Malay swords can be used for contemporary interpretation (Figure 4.7).
2. Imitation of the Malay traditional woodcarving patterns should be used for the contemporary interpretation in lamppost design.
3. The fixture style and design should be consistent with the project, such as lighting systems for vehicular and pedestrian circulation, lighting for buildings, landscape illumination, and main access.
4. Install pedestrian lighting such as a bollard-type light fixture at possible walkway areas to encourage pedestrian use.
5. Lighting should be controlled for quality as well as intensity. Standards for luminaries should be adopted to prevent light shining beyond property lines.
6. Light fixtures should be placed for maximum effective illumination (Figure 4.8).
7. Lamps can be placed on a post containing an informational banner.
8. Lighting should be located in proximity to the area to be illuminated in order to maximize glare. Spotlights or landscape floodlights should be directed away from public rights of way.
9. Lighting should illuminate the walkways and pedestrian areas, not the skylight.



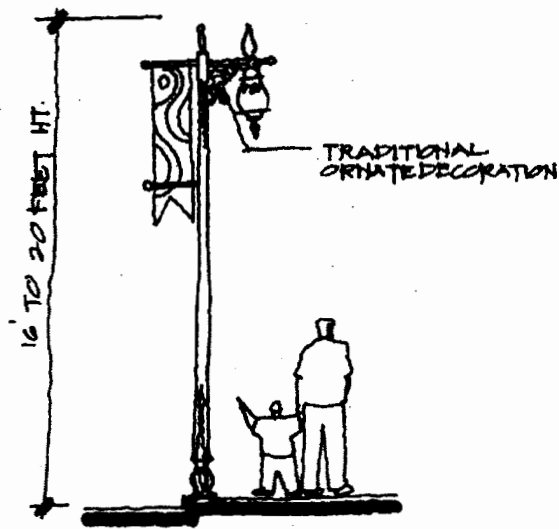


Figure 4.7. Traditional lighting of a pedestrian walkway

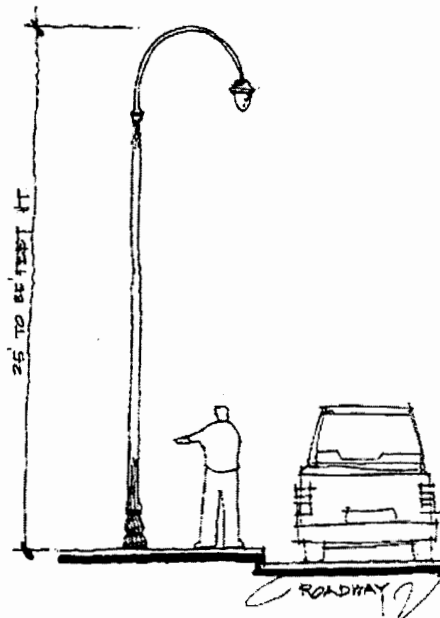


Figure 4.8. Lighting for street traffic and pedestrian walkway combined

## **Signage**

### **Purpose and intent**

Exterior or outdoor signs communicate information via painted and projected surfaces. Signage can be for location identification, promotional signs, and directional purposes, such as advertising the type of business, service or activity conducted, information about an activity or service which may or not be provided at the site of the sign. It also serves for vehicular and pedestrian traffic control, guidance, and information.

### **Guidelines**

#### **General**

1. The materials, color, design, and style should be compatible with the surrounding area and traditional Malay architectural styles, such as the use of traditional Malay woodcarving imitations (Figure 4.9).
2. The location, type, scale, design, materials, color, style, illumination, and number of signs should be in according to pre-set standards to ensure attractive integration into the design of buildings and spaces.
3. Signage on existing buildings should consider their relationship to the building's façade and immediate context.
4. The design and location of signage should be visually interesting and incorporate an appropriate character for the streetscape (Figure 4.10).
5. Color should be used in order to increase clarity or classify rank of the sign such as cultural, retail or recreational.

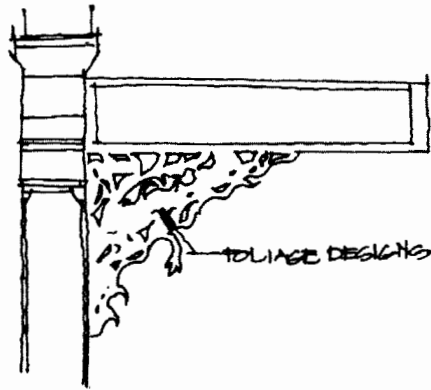


Figure 4.9. Signage carving

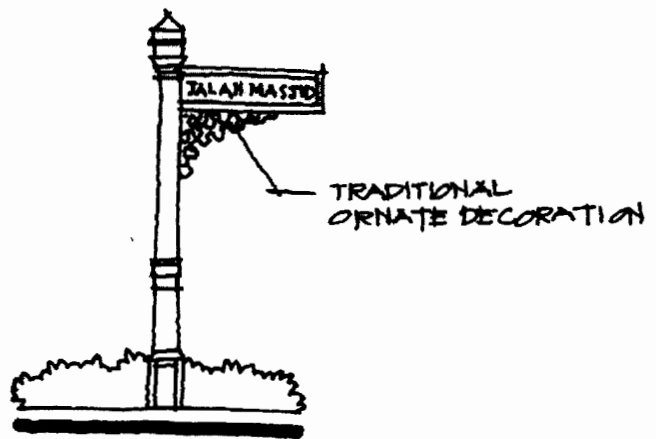


Figure 4.10. Signage that is compatible with the streetscape

6. The signage should be legible and appropriately located and sized according to its purpose.
7. The signage should be in a uniform quality and style.
8. The signage should not dominate or obscure other signs, and the number of signs at one location is limited to avoid visual clutter or confusion.

9. The signage should be constructed of durable materials and finishes that are easily maintained.
10. Ground-mounted monument signs are typically free standing. Because they are an integral part of the landscape and streetscape, they must be proportioned to be compatible with both the streetscape and landscape. The uses of traditional Malay designs, such as the imitation of typical traditional Malay post structures, can be employed (Figure 4.11).
11. Ground-mounted pole signs are typically free standing, elevated, and supported by one or more structural elements that are not attached to buildings. The signage should be compatible with the streetscape and could be located 30 m apart from another pole sign.
12. Signage should meet the 24 hr/year-round needs of users. Night and low ambient lights are recommended.

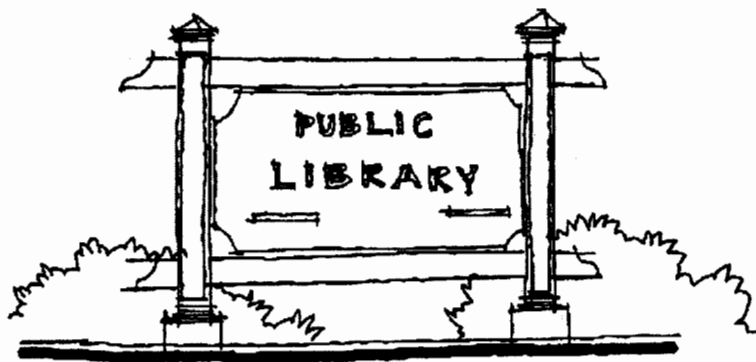


Figure 4.11. Ground-mounted signage that is compatible with the adjacent landscape

### Commercial shopping

1. Signage in commercial shopping lots should be related to the scale of the building and its setting, while still providing visual interest and commercial vitality to the public.
2. The signage should be visible from the street.
3. Signage should not cover building details (Figure 4.12).

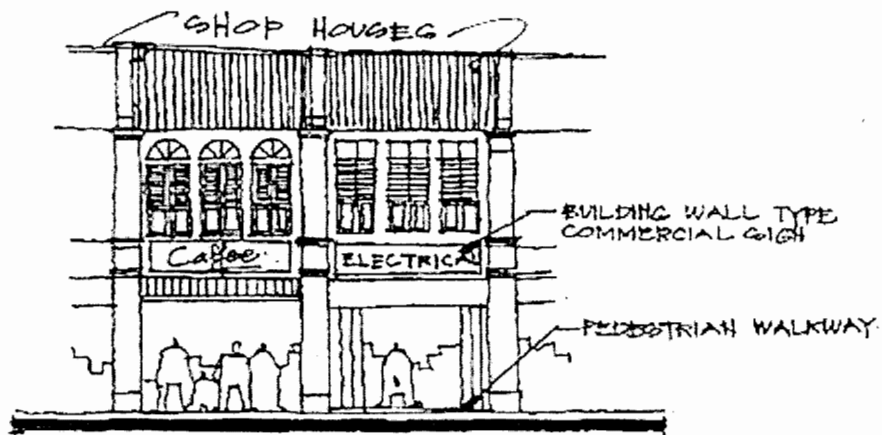


Figure 4.12. Building signage that is clear and easy to view

### Outdoor

1. Signage for outdoor usage is primarily for identification and direction, not for advertising. Usually the signage is relatively large but few in numbers. Therefore, signs should be located and designed to enhance the architectural and landscape presentation of the scale of space.

## Parking

### Purpose and intent

Parking lot design needs to be carefully considered in relation to the surroundings, both natural and man-made, to achieve attractive and pedestrian-friendly building frontages. Parking lots also need to include safety features that accommodate all users, especially the handicapped as well as children. Generally, parking lots should be landscaped to avoid unsightly, bulky and articulated buildings nearby.

### Guidelines

1. Parking lots should be accessible to physically challenged individuals.
2. Exposure of large surface parking lots to public view needs to be minimized by site layout, natural topography or berms.
3. All surface car parking should be landscaped with attractive, shady plants such as canopy shade trees and shrubs (Figure 4.13).
4. Clear and legible signs, and different types of color and paving materials should be used in order to define pedestrian zones within parking areas (Figure 4.14).

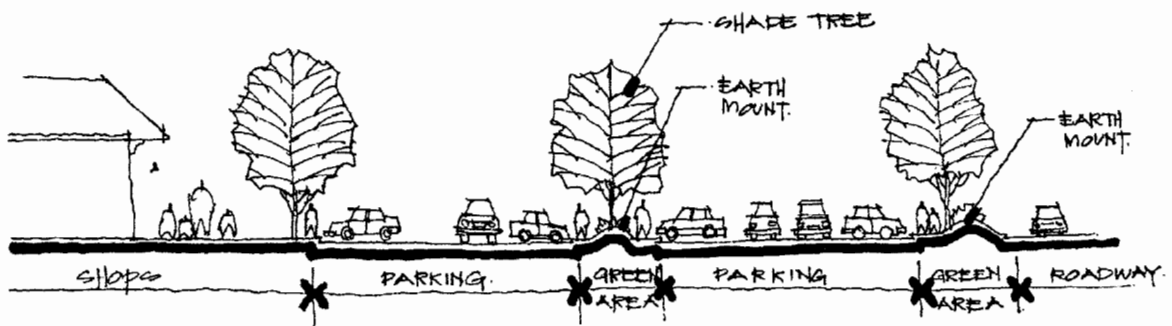


Figure 4.13. Parking that is landscaped with attractive shade trees as dividers

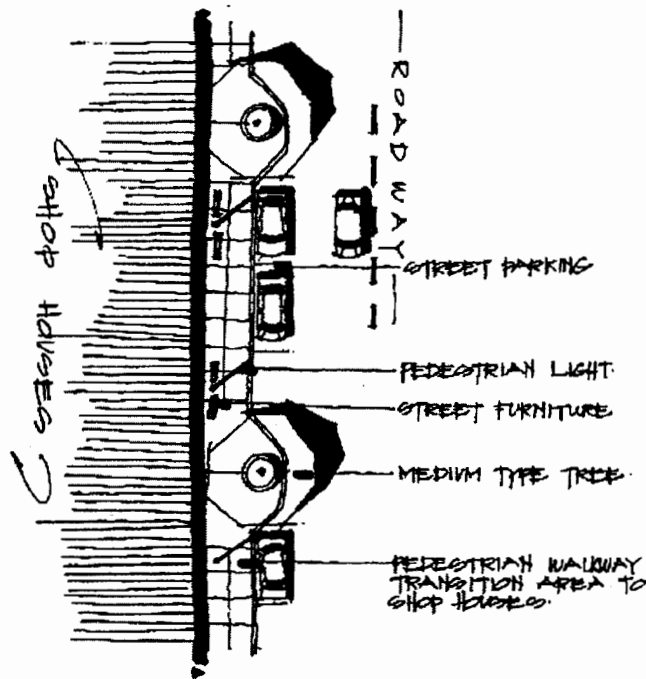


Figure 4.14. Well-designed pedestrian walkway between shops and the roadway

5. Avoid large mass parking area and large mass building blocks; instead use decentralized parking to minimize visual vastness of a parking area (Figure 4.15).

### **Plant material – (Conservation and protection of significant vegetation)**

#### **Purpose and intent**

Significant vegetation refers to existing vegetation that is valued for its historical significance, age, size and condition. The purpose of these guidelines is to conserve and preserve in the greatest quantities, quality vegetation that benefits the environment and development.

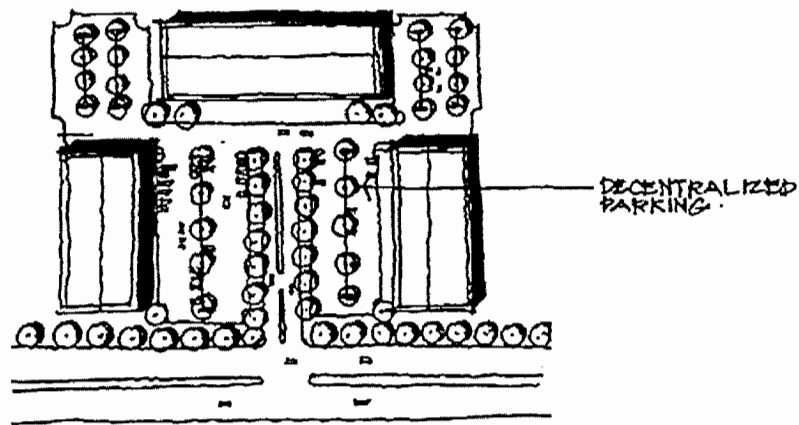


Figure 4.15. Creation of decentralized parking in a large parking lot  
(Land and Community Associates, 1995)

#### **Location and layout “around” significant existing vegetation**

1. Preserve existing trees (i.e., old trees) that are still in good condition.
2. Locate common property boundaries adjacent to significant vegetation, where building development allows sufficient clearance, adding immediate economic and aesthetic value to properties.
3. Relocate significant vegetation in the development area where road layout disturbs the existing location.

#### **Protection of significant vegetation**

1. Protect significant vegetation during construction by fencing-off areas.
2. Minimize compaction and changes in soil depth within the drip line, disturbance of root system and disturbance of the existing drainage pattern.



## Maintenance

1. Pruning of root and canopy.
2. Irrigation and fertilizing.

## General guidelines

1. Maintain a relative scale with the streetscape elements.
2. Offer protection from sun, wind, glare and airborne pollution (Figure 4.16 and 4.17).
3. Avoid conflict with service or traffic sight visibility requirements.
4. Specify and locate shade trees in combination with “durable”, low under-storey planting along frontage, pedestrian walkways and in car parks at commercial building areas (Figure 4.18).



Figure 4.16. Shade trees protect roadways and sidewalks from the sun

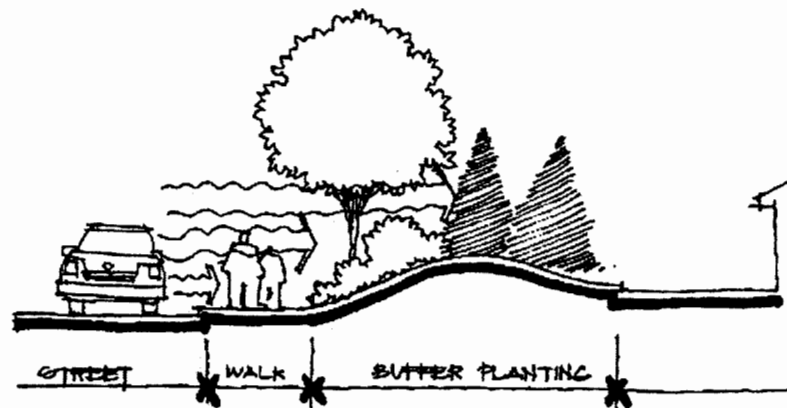


Figure 4.17. Buffer planting design to reduce noise and pollution

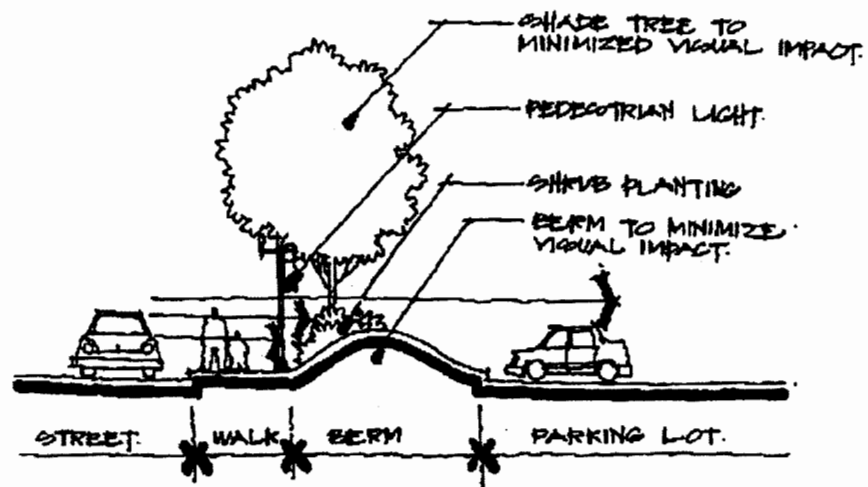


Figure 4.18. Hierarchy of planting used for visual impact of landscape design

5. The shape and color of plant materials should be according to the cultural background of the royal town, such as yellow flowers (yellow is the royal family's formal color) (Figure 4.19 and 4.20).
6. Vegetation should be utilized to improve road safety and pedestrian comfort.
7. Number of shade trees per car park =  $\frac{\text{car park area} \times 25\%}{\text{shade provided per tree}}$
10. The calculation above is averaged at one medium shade tree per 2.5 car parking spaces. The intention of this calculation is to provide flexibility of the design, which specifies a minimum shade requirement which can be achieved by either having many small trees or fewer large trees (Federal Department of Planning, 1999, September).

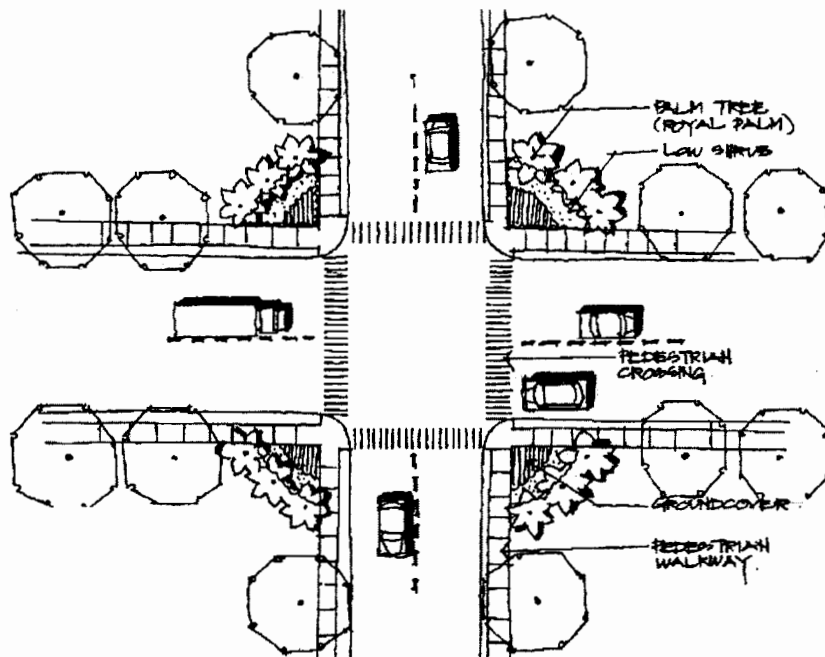


Figure 4.19. Planting design using the royal color for shrubs and groundcovers

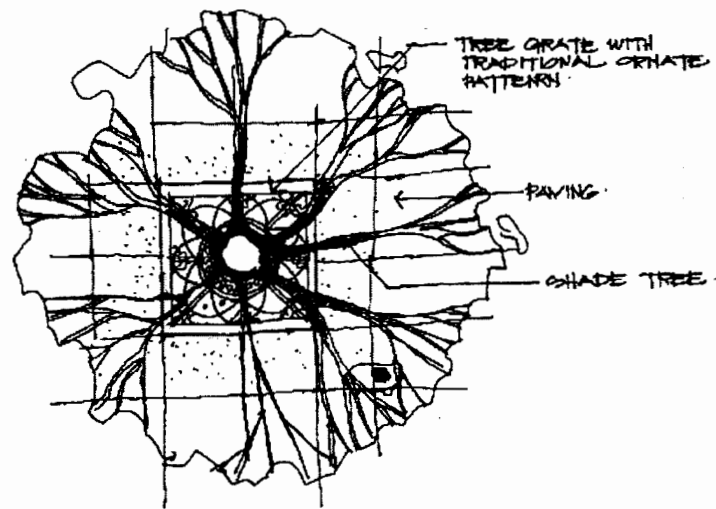


Figure 4.20. Tree grate using a traditional Malay pattern

## Drainage system

### Purpose and intent

To promote flood protection from the major flooding and minor flooding.

### Guidelines

1. For pedestrian safety and maintenance access, open drainage channels should be uniformly overlaid with removable concrete covers.
2. A minor system flood protection should include storm sewers and roadside, or backyard swales (Figure 4.21 and 4.22). These systems are usually designed to accommodate 2, 5, or 10-year storms. The overflow into adjacent areas will occur when this system overflows. It will contribute to the temporary loss of their use for short period of time without serious damage (Harris & Dines, 1998).

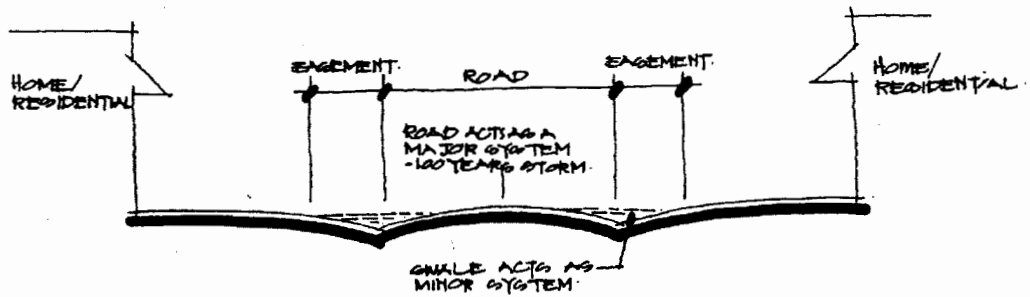


Figure 4.21. Major and minor system flood protection for typical suburban location (Harris & Dines, 1998, p. 330)

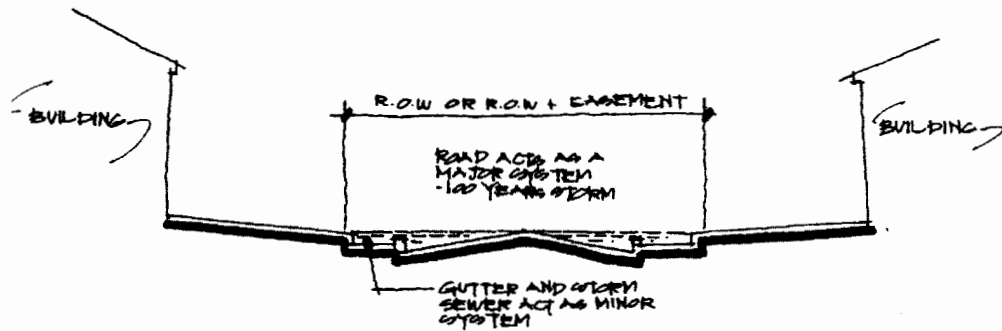


Figure 4.22. Major and minor system flood protection for typical urban location (Harris & Dines, 1998, p. 330)

3. A major flooding control system can be utilized whenever a minor system's capacity is exceeded (Harris & Dines, 1998). This system is useful for a probable major rainfall such as a 25, 50, or 100-year storm. Typically in this system, when the minor system is exceeded, the water will take an alternative route through the landscape (Harris & Dines, 1998).

## **Commercial buildings**

### **General purpose and intent**

The architecture in Pekan should reflect and express the town's culture, historic and geographic distinctiveness. Climate factors also should be considered in design selections because of landscape and architectural responses to climatic constraint.

### **Building size, height and spacing**

**Purpose and Intent.** Buildings with random height, size and spacing may create an unattractive view. Buildings need to be designed sensitively to be compatible with each other and the surrounding area in order to achieve an attractive and harmonious environment. Building height and the space between buildings often form a person's first image of the city; therefore, buildings should be designed to form a desirable impression.

### **Guidelines**

1. Buildings should not vary more than one story of the predominant building height.
2. The size of the building should no be more than 50% the average volume of the nearby buildings.
3. Building size should complement, rather than dominate.
4. The spacing between buildings should create a balanced and attractive skyline in harmony with the topography and other natural features of the cityscape.

## **Building siting, massing scales and roofs**

**Purpose and Intent.** For decades, architectural design has given expression and articulation to the base, mid-height and roofs of buildings. Although modernism and technology have influenced a departure from this principle, it is still valid from both an urban design and cultural point of view.

### **Guidelines**

1. Scale-defining features should be used for nearby buildings. The building should demonstrate a similar attitude with neighboring buildings (Figure 4.23).
2. The floor level abutting pedestrian places should be used to the maximum practical extent for activities involving people, while maintaining a visual interconnection between indoor and outdoor spaces
3. New buildings should be placed with a similar attitude in the way the existing buildings are placed on the site, such as their orientation to the roadways and pedestrian circulation systems, natural topography, existing landscape elements and other buildings.
4. The use of roof forms should be similar to the surrounding historical buildings and compatible with the site's cultural and historical elements, such as the Malay traditional roof design with fascia board or tiles material. The traditional Malay roof is typically designed to allow easy water flow from rainfall (Figure 4.24).
5. Buildings should demonstrate a composition in geometric form that is similar to the surrounding buildings. For example, the massing of the building may be a simple rectangular or more complex design (Figure 4.25).

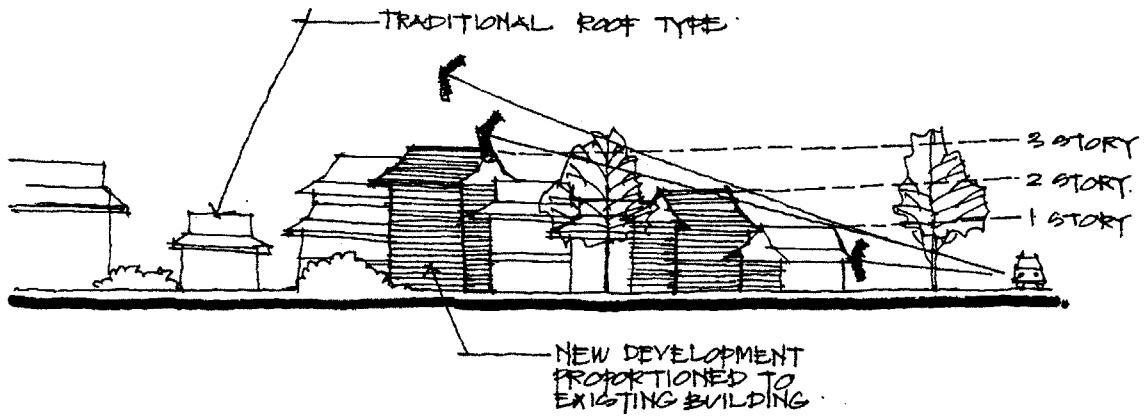


Figure 4.23. Buildings constructed in proportion to one another

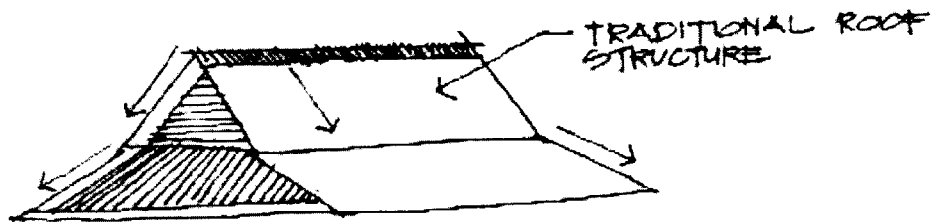


Figure 4.24. Traditional Malay roof style

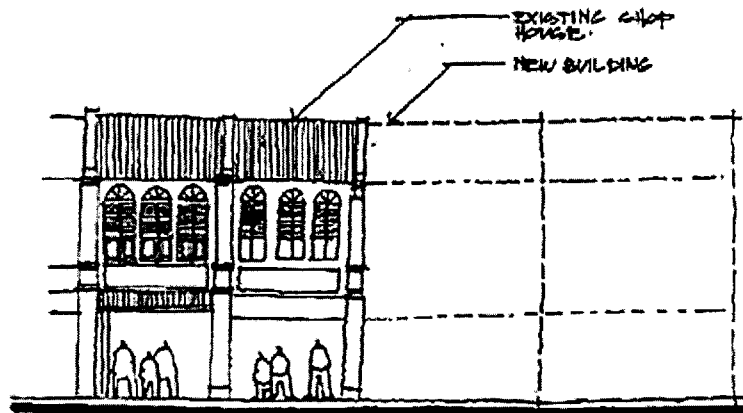


Figure 4.25. Building levels are maintained in proportion to one another



## **Construction materials, color and detailing**

**Purpose and intent.** The appearance and image of the town is very much influenced by the choice and detailing of materials and colors. This guideline focuses on the importance of durability, weathering and maintenance in the consideration of initial finish and color.

### **Guidelines**

1. Construction materials and detailing of exterior walls should be in an agreeable surface, and easily maintained (i.e., not easily stained and discolored due to Malaysia's weather).
2. Materials and colors need to be of high quality and possess a character or an image of the building, such as the use of Malay traditional columns influenced by classical colonial British design (Figure 4.26).
3. The building should draw inspiration or re-invent the character of traditional design using modern materials.
4. The use of materials should be consistent with the surrounding development when a dominant characteristic has already been established or a master plan has already been specified.
5. The construction materials also should be the same or visually similar to the surrounding buildings.
6. Detailing should be similar with the nearby buildings, such as the use of Malay traditional window design influenced by the Jawi Peranakan design from Arabia (Figure 4.27 and 4.28).

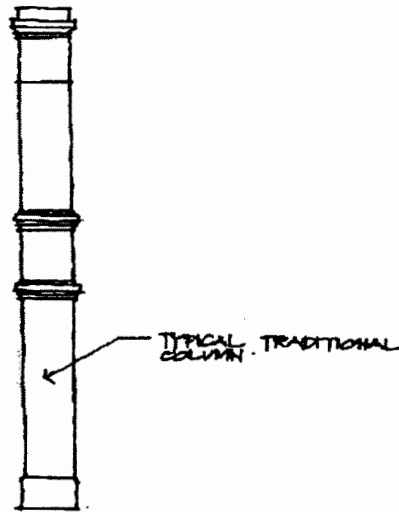


Figure 4.26. Traditional Malay column incorporating classical colonial British design



Figure 4.27. Traditional Malay/Jawi Peranakan upper window arch

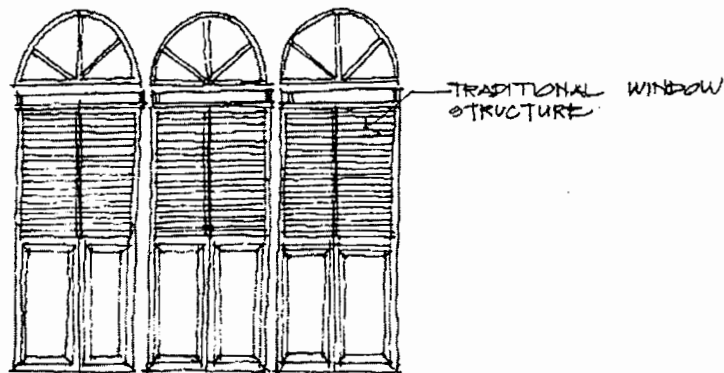


Figure 4.28. Complete Malay/Jawi Peranakan style window detailing

### **Summary**

This chapter presented guidelines for historic conservation and preservation in Pekan, Malaysia, based on a visual analysis of existing structures, by landscape features: pedestrian walkways, pavement, planter boxes, plant material, lighting and signage. Design guidelines were also included for structural analysis of roofing, facades and color. These guidelines could also be modified for the historic conservation and preservation of similar historic cities and towns. The next chapter presents a summary of the research, discussion, conclusions, and recommendations for future research.

## **CHAPTER 5: SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS**

The previous chapters of this study consisted of the introduction, review of literature and an introduction to Malaysia, methodology, results and presentation of design guidelines. This chapter presents a summary, discussion and conclusions drawn from the research, followed by recommendations for further study.

### **Summary**

As discussed previously, rapid new infrastructure development in the royal town of Pekan, Malaysia has contributed to a lack of attention paid to the identity and image of this royal town and its historic district. The purpose of this study is to evaluate existing designs based on historic and cultural preservation and provide a set of design guidelines for renovation as well as modernization by constructing new buildings, streetscapes, and landscapes, etc. The guidelines could be presented to the local authority (Pekan District Council) for landscape architects, architects and planners to use in preserving the qualities and characteristics of the historic and cultural district of Pekan. They could also be modified to preserve the historical and cultural heritage of other Malaysian cities and towns.

This study focuses on the streetscape features and the historical commercial buildings in Pekan that are located along the Pahang River. It was conducted based on an inventory of the site and an analysis of the actual site for the possible designation of this area as a historic district. The results from the inventory and analysis could also be used to establish uniform design guidelines for historic and cultural preservation of similar towns in Malaysia that face renovation and modernization.

## **Discussion**

The purpose of this study was to identify and analyze design problems currently in Pekan's downtown section, and provide design guidelines based on these existing problems. The inventory and analysis of the site were conducted during the summer of 2000. The inventory and analysis revealed a general, overall weakness in the existing design guidelines by the local authority, the Pekan District Council.

The inventory and analysis of the site revealed the ineffectiveness of existing design guidelines to enhance the cultural identity of the royal town of Pekan. This might due to the lack of awareness of the local authority in establishing design guidelines in Pekan. The weakness or the lack of design guidelines in Pekan also indicated a lack of community awareness of design issues for Pekan. This could be due to the lack of public participation and a public voice in the community.

Historic preservation is relatively new to Malaysian communities and the local authorities that govern them. Many do not envision that features such as streetscape and landscape features can be used to foster historical and cultural preservation of historic as well modern commercial building. Based on the analysis conducted by this researcher, the historical commercial buildings were found to lack the elements required for preservation and rehabilitation. Many buildings lacked aesthetic appeal due to problems such as mold, broken windows or inappropriate color. There was also a lack of visual amenity in the construction of new buildings, which appeared to be incompatible with the surrounding buildings. In many cases, small attempts were made to modernize by installing new streetscape elements, however, they were incompatible with the surrounding traditional commercial building and natural landscape.

In order to achieve a sustainable goal in establishing and implementing design guidelines for a cultural and historic district, landscape architects, architects and planners should take serious consideration of successful design guidelines to preserve the historical and cultural background of the district. Design guidelines not only provide guidance to the local authority and design professionals, but they also affect the image and identity of the town.

Design guidelines also need to be considered by the local authorities as a medium to achieve best solution in providing public amenity and provide public's need. Local authority should be sensitive to design that involved public amenity and safety.

### **Conclusions**

This study attempted to develop design guidelines for the downtown of Pekan. Four questions were developed to guide the study:

*Research Question 1: Do the existing design guidelines assist in preservation and conservation of historic and cultural heritage as well as the image of Pekan?*

Based on the inventory and analysis, the current elements of design in Pekan, Pahang lack the characteristics that can ensure the identity or image for this royal town. Existing streetscape and commercial buildings indicate an apparent lack of preservation and conservation considerations. An image of the town should be established based on its cultural and historical aspects to sustain its identity and traditional continuity. Appropriate design guidelines will establish the image and identity of the town through details and elements in streetscape elements and buildings. For example, the Georgetown district in Penang, Malaysia has been recognized by the World Monuments Watch as a historic

district. Recently, a draft of new design guidelines were prepared by the Penang Municipal Council in order to preserve and conserve the historical and cultural image of the town. This was based on the realization of the need for specified design guidelines to preserve the identity of the town. As Lynch (1960) noted, a workable image requires first the identification of an object, which implies its distinction from other things, its recognition as a separable entity. In the case of Pekan, its cultural and historical aspects are the distinctive qualities that need to be considered.

*Research Question 2: How could improved design guidelines be drawn to increase public awareness of historic preservation and conservation as well as the image of Pekan?*

Based on the inventory and analysis, inappropriate designs impact the community not only in public amenities but also affect the image of the town. Improved design guidelines with safety standards that are based on cultural and historical aspects of Pekan strengthen the image of the town. According to Lynch (1960), "...shape, color, or arrangement, which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment" (p. 9). In this case, shape, color and arrangement were based on Pekan's historical and cultural background. In the U.S., design guidelines for the historic district of Galveston, were published by the historical district board of Galveston. The guidelines were published, "in order to preserve the city's heritage and guide property owner in determining the type of alterations, renovations and changes that will maintain the special qualities of the town" (Beasley, 1981, p. 3).

*Research Question 3: How can design guidelines for historic preservation and conservation be used to meet the needs of the local authority, in this instance, the Majlis Daerah Pekan (Pekan District Council)?*

Guidelines such as those for pedestrian walkways and sidewalks, planter boxes, lighting, signage, building size, height, spacing, building siting, massing scales, roof, construction materials, color and detailing, could be useful to the Pekan District Council in planning their town areas. The inventory and analysis presented in Chapter 4 was conducted to determine the design problems in Pekan. This provides evidence for the local authority to realize the need for developing and implementing design guidelines. The guidelines developed in this study could not only serve to highlight the need for uniform standards, but also they could serve to guide the Pekan District Council in implementing their own design solutions for the public's needs as well as to base new construction and renovation to reflect the royal town's image and identity. Finally, these new design guidelines will be useful to the local authority in maintaining the identity and the image of Pekan.

*Research Question 4: What can be done to enable the planning board in other cities or towns in Malaysia to comply with preservation and conservation issues?*

Conservation and preservation issues can be integrated with progressive design guidelines. Parts of the design guidelines presented in Chapter 4 were derived from conservation and preservation aspects. In addition, the guidelines were presented for historical commercial buildings, which stress the preservation of historical buildings. In the U.S., the town of Culpeper, Virginia is an example of design guidelines that were integrated with preservation and conservation issues. The town of Culpeper was established as a Historic District in 1982 (Land and Community Associates, 1988, p. 5). According to Land and Community Associates, one of the goals of the establishment of the historic district is to



preserve and protect the historic structures in the town. In 1987, after the application to National Park Service, the Culpeper Historic District was formally listed in the National Register of Historic Places (Land and Community Associates, 1988, p. 5).

Perhaps the local authority in Pekan, Malaysia, can review successful development of historical societies in other similar historic cities for the purpose of national or statewide preservation of its royal town. This would enable setting uniform standards for future historic and cultural preservation of areas that are officially designed as historic sites. Any renovations or new structures would need to comply with those standards. Thus the historic and cultural preservation could ensure that the generations yet unborn could appreciate their heritage.

### **Recommendations**

1. This study assessed a specific set of streetscape and landscape features, namely landscape features such as sidewalks, signage, lighting, signage, planter boxes, parking lots and plant material, in addition to conducting a structural analysis of features such as roofing, façades, and color. Future studies could include additional features such as parks, playgrounds, amusement centers, athletic centers/fields, etc.
2. Commercial buildings were considered in the current study. The historical and cultural preservation of residential areas could be the focus of a new study. Two famous examples of early historic preservation efforts in the U.S. are: Williamsburg, VA and Boston, MA. Old residential areas such as Georgetown in Washington, DC and Frederick, MD, are also good examples. Malaysian counterparts could be

Malacca and Negeri Sembilan. Both cities have very old residential areas of distinctive historical value that could be promoted through a national historic register.

3. Public participation needs to be considered in order to achieve sustainable goals in preservation and conservation issues. Design professionals should take into consideration both residents's and local authority's needs. The design guidelines should not be only determined by local authority, but need to be explained and understand by the residents, so effective design guidelines can be established and the community can involved in the design process of the town.

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## ACKNOWLEDGEMENTS

First of all, I am grateful to my major professor, Dr. Timothy Keller, for his valuable advice and support. His enthusiastic interest in Malaysia has given me a great courage to pursue this research. I am thankful for his sincere willingness to help me in so many ways, not only for this study, but also throughout my stay in the United States. His advice and kindness will be remembered forever. To my committee members: Bill Grundmann, Lynn Paxson and Micheal Martin, I am grateful for their valuable insight and guidance. To the Department of Landscape Architecture, I would like to express my sincere thanks.

I extend special thanks to the many friends in Ames who supported me during my program of study. Six years in Ames have given me a wonderful experience in so many ways. I also thank my friends in Malaysia who supported me even though they were miles away.

I am grateful to my editor, Pat Hahn, who did so much to add to the quality of this written thesis, and for her support of so many Malaysian graduates during their tenure at Iowa State University.

I am deeply thankful to my family back home especially my mother, Mariam Abdullah from the bottom of my heart for her prayers, love and assistance throughout my educational journey. Your courage always gives me strength in so many ways. Also, among others, I would like to thank my sister, Rosmah Hashim for her support and understanding.

Finally, and most importantly, I am especially indebted to my husband, Mohd Said Musli, who is always by my side, for his patience, everlasting love and support of our dual careers. This thesis would not have been possible without his prayers and never-ending



belief in my abilities. Thank you for helping me to become a better person and making everyday of my life full of love and surprises. To my lovely infant daughter, Nur Saidatul Lyana, you have given me much joy already during the final phase of my graduate work at Iowa State University in Ames—may you one day have the opportunity to study abroad, too. Your future is still a dream.